



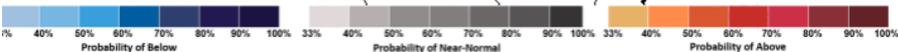
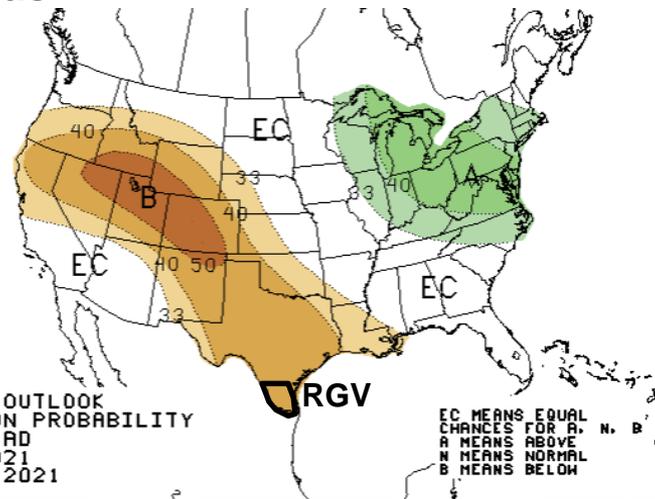
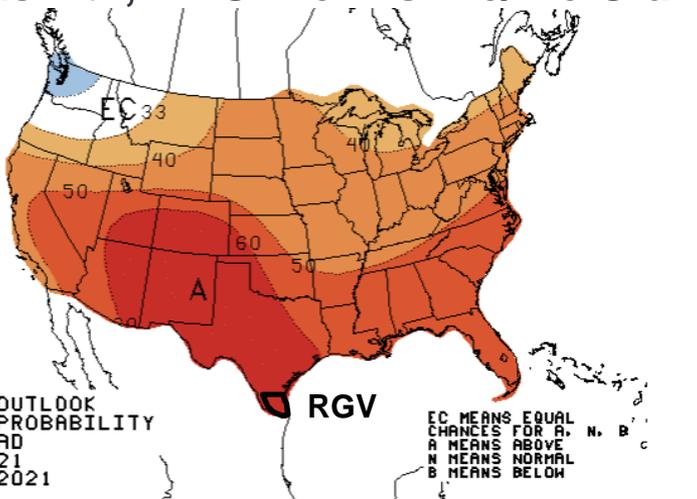
# NATIONAL WEATHER SERVICE

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## NOAA Spring (April-June) 2021 Outlook Perspective for the Rio Grande Valley/Deep S. Texas Region

March 18, 2021

Barry Goldsmith, NWS Brownsville/Rio Grande Valley, Texas



# Key Takeaways

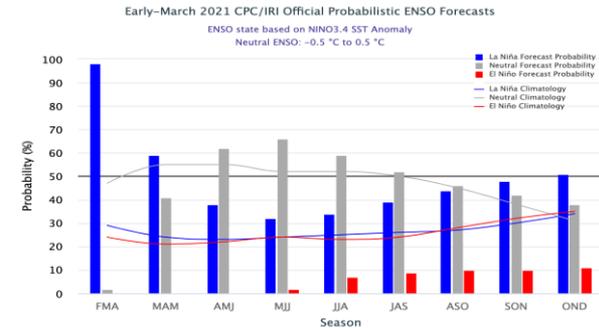
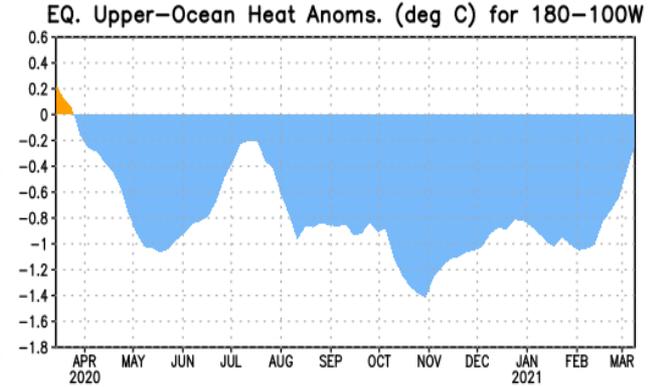
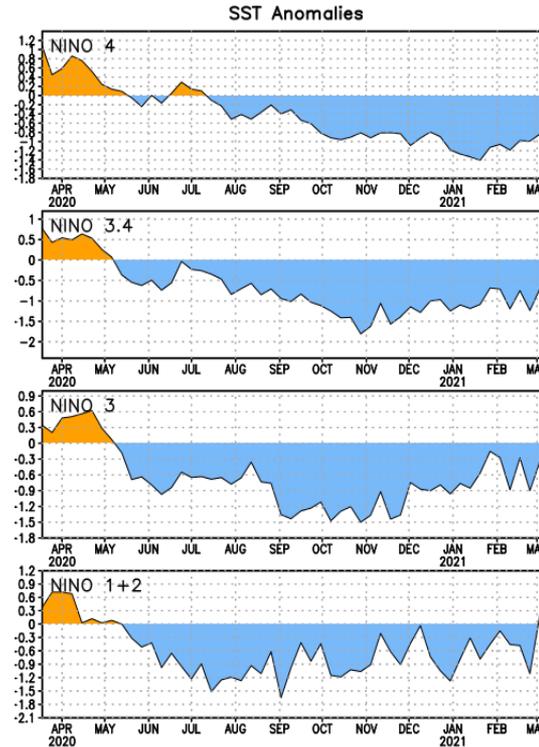
- **Above to much above average temperatures** and **below average precipitation** remains the forecast
- Based on this forecast becoming reality:
  - **Drought will worsen by the end of June.** **Exceptional Drought** may cover most areas by mid June. Uncertain if a “one-off” torrential rain event will occur thereafter.
  - **Wildfire spread threat will remain extreme** based on the combination of “super” freeze-cured fuels with additional drying. April will have additional critical low humidity and strong wind events conducive to **explosive** wildfire spread; May and June could as well.
  - **Municipal and Agricultural water shortages** are expected to be an issue beginning in April as Falcon Reservoir will remain low – and need releases from Amistad to assist.
  - The threat for **Widespread Severe Weather (Wind/Hail)** is slim, but local events cannot be ruled out, particularly in May.



# The “Why” of the Forecast: La Niña, Slowly Ending

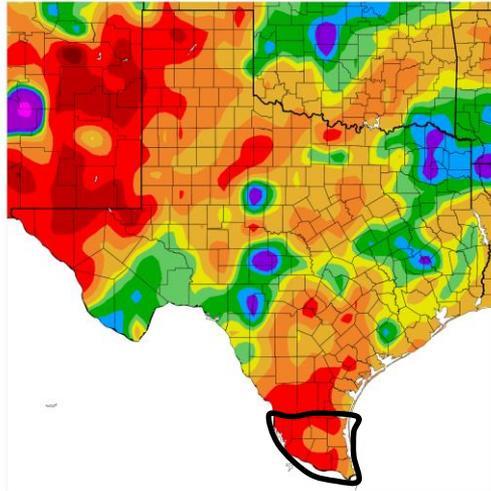
- Moderate La Niña continues (blue colored areas; -1 to -1.5), but should edge to “neutral” by May
- Persistent warmth over several years in the southwest U.S./northern Mexico is expected to continue

Year	DJF	JFM	FMA	MAM	AMJ	MJJ	JJA	JAS	ASO	SON	OND	NDJ
2020	0.5	0.5	0.4	0.2	-0.1	-0.3	-0.4	-0.6	-0.9	-1.2	-1.3	-1.2
2021	-1.1											

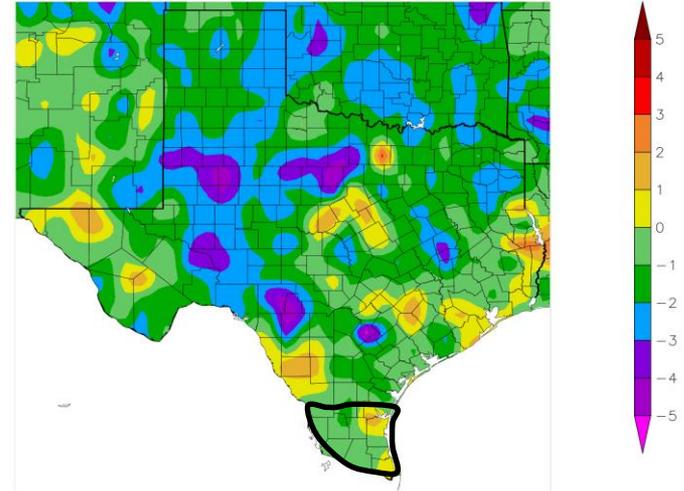


# Winter 2020/2021: The Dryness Continued

Percent of Normal Precipitation (%)  
12/1/2020 – 2/28/2021



Departure from Normal Temperature (F)  
12/1/2020 – 2/28/2021



Generated 3/10/2021 at HPRCC using provisional data.

NOAA Regional Climate Centers

Generated 3/10/2021 at HPRCC using provisional data.

NOAA Regional Climate Centers

- Dry to Very Dry Compared with Average. Rainfall generally 0.5 to 3 inches (west to east) (average: 3 to 4.5 inches)
- Temperatures slightly below average; Feb. cold outbreak (Feb 11-20) tilted the scale for the season
- Frequent “dry” fronts in December-January, and the killing/curing freeze in February, worsened the drought and fully dried out grasses and brush for March.

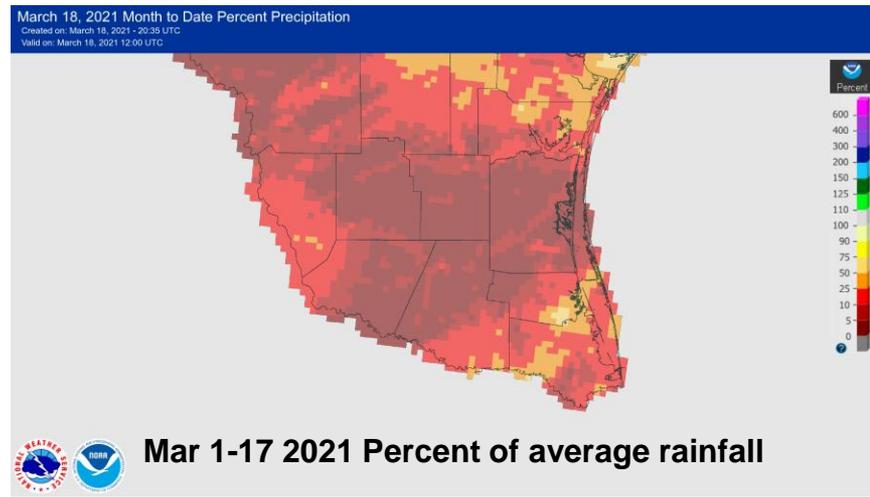


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# March 2021 So Far

- Virtually **no rainfall so far**; totals range from near zero to two-tenths of an inch. This is generally zero to 25 percent of average.
- The **warmth returned so far**; temperatures running 2 to 3.5°F above average
- Combination of dry, warm weather has worsened drought; all but eastern Cameron/Willacy are in **Extreme to Exceptional Drought as of March 17...and** areas are expanding weekly
- More than **a dozen wildfires** have started, with one on the **King Ranch burning 10,000 acres** on March 17 alone

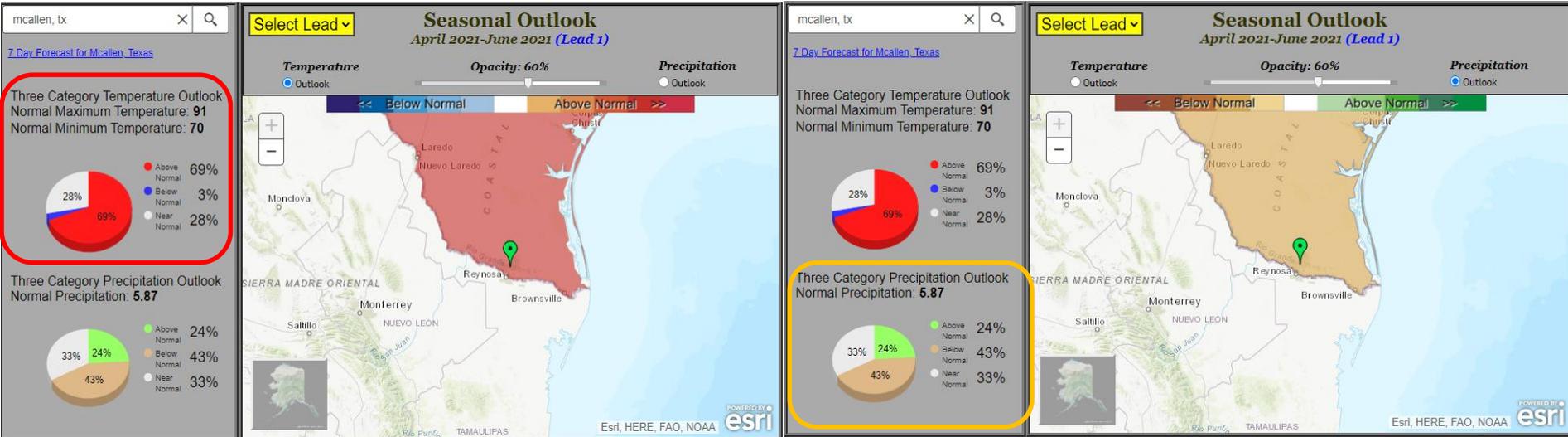


“King” Fire, 3/17/21



Smokey Sunset, 3/17/21

# The April-June 2021 Outlook: Rio Grande Valley (McAllen as Anchor Point)



- **Temperature: A 69% chance of above average.** Seasonal average – Afternoons, Rising from ~85° (on 4/1) to ~97° (on 6/30). Mornings: Rising from the lower 60s (4/1) to the mid 70s (6/30). Just a 3% chance of below average in 2021.
- **Rainfall: A 43% chance of below average.** Seasonal average: 6 to 6.5 inches of rainfall
- **Probability of above average precipitation is 24 percent.**



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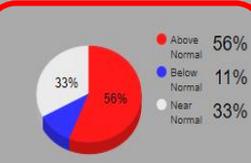
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# April Outlook: Rio Grande Valley (McAllen as Anchor Point)

mcallen, tx

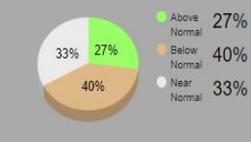
7 Day Forecast for McAllen, Texas

Three Category Temperature Outlook  
Normal Maximum Temperature: **86**  
Normal Minimum Temperature: **64**



Above Normal	56%
Below Normal	11%
Near Normal	33%

Three Category Precipitation Outlook  
Normal Precipitation: **1.23**

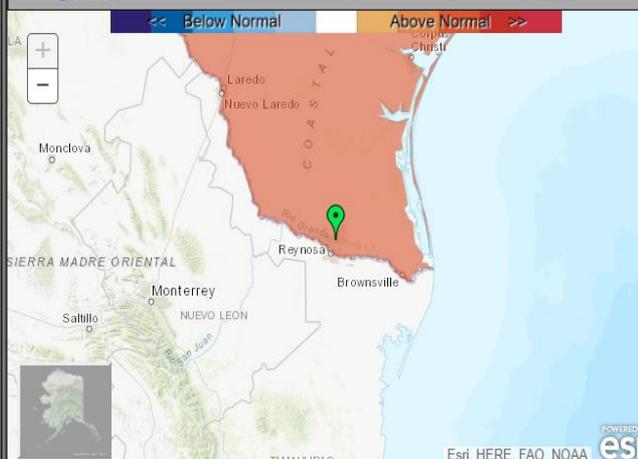


Above Normal	27%
Below Normal	40%
Near Normal	33%

### Monthly Outlook April 2021

Temperature Opacity: 60%

Precipitation Outlook

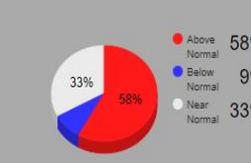


Esri, HERE, FAO, NOAA

McAllen, TX, USA

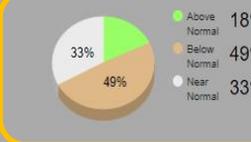
7 Day Forecast for McAllen, Texas

Three Category Temperature Outlook  
Normal Maximum Temperature: **81**  
Normal Minimum Temperature: **58**



Above Normal	58%
Below Normal	9%
Near Normal	33%

Three Category Precipitation Outlook  
Normal Precipitation: **0.89**

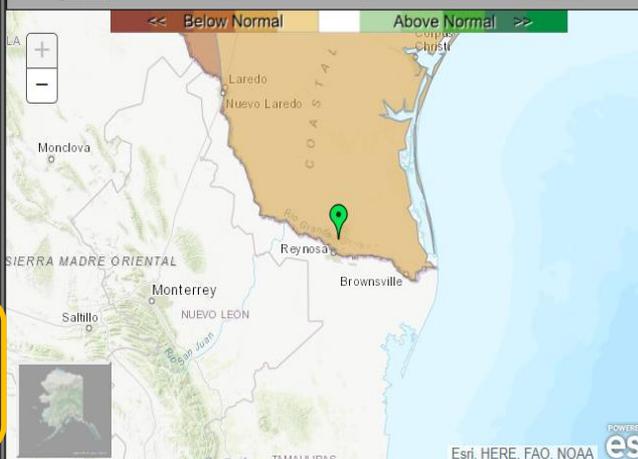


Above Normal	18%
Below Normal	49%
Near Normal	33%

### Monthly Outlook March 2021

Temperature Opacity: 60%

Precipitation Outlook



Esri, HERE, FAO, NOAA

- **Temperature:** A **56%** chance of **above average**. Monthly average – Afternoons, Rising from ~85° to ~89°. Mornings: Rising from ~63 to 69°. Just an **11%** chance of below average.
- **Precipitation:** A **49%** chance of **below average**. Monthly average: 1.25 to 1.5 inches of rainfall. An **18%** chance of above average.



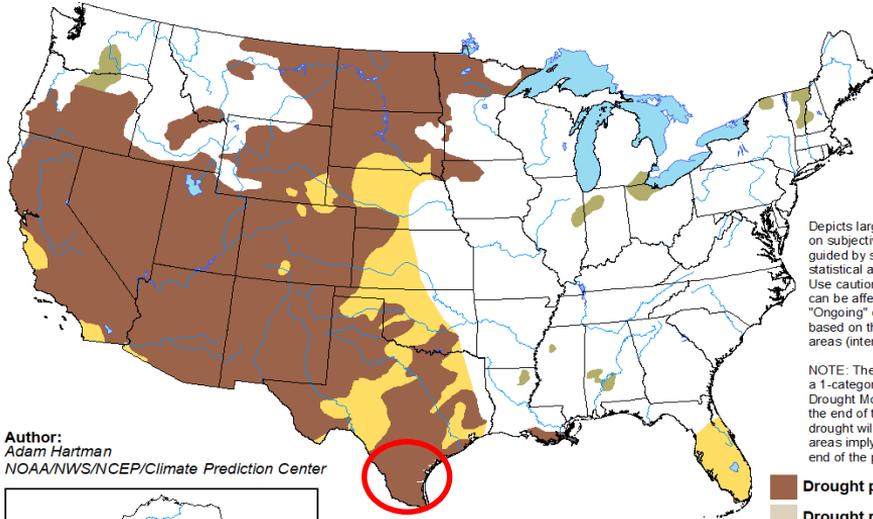
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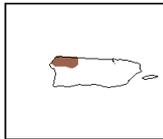
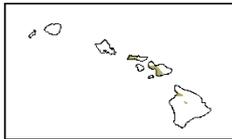
# The "Droughtlook"

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

Valid for March 18 - June 30, 2021  
Released March 18



Author:  
Adam Hartman  
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).

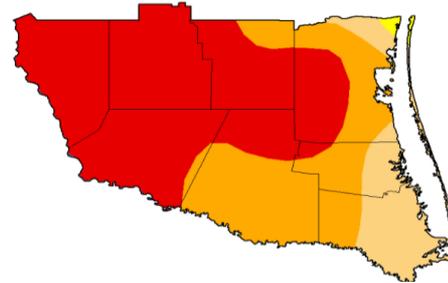
NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

- Drought persists
- Drought remains but improves
- Drought removal likely
- Drought development likely



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

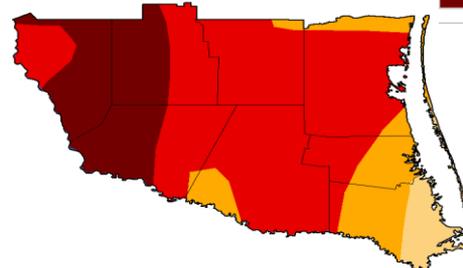
Observed: February 23, 2021



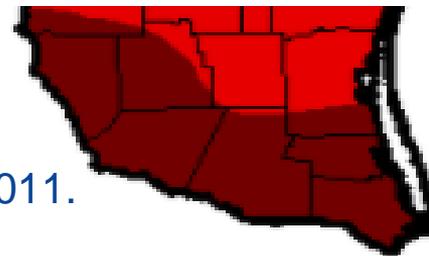
**Drought Classification**

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)

Observed: March 16, 2021



Observed: June 21, 2011



\*Analog assumes very warm/dry conditions prevail

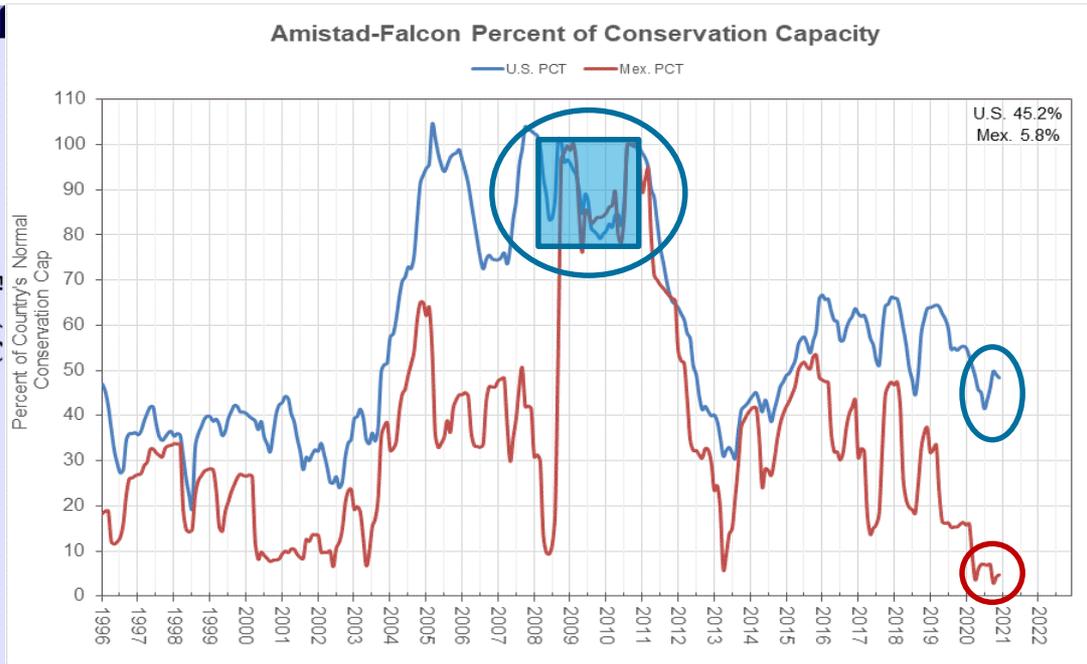
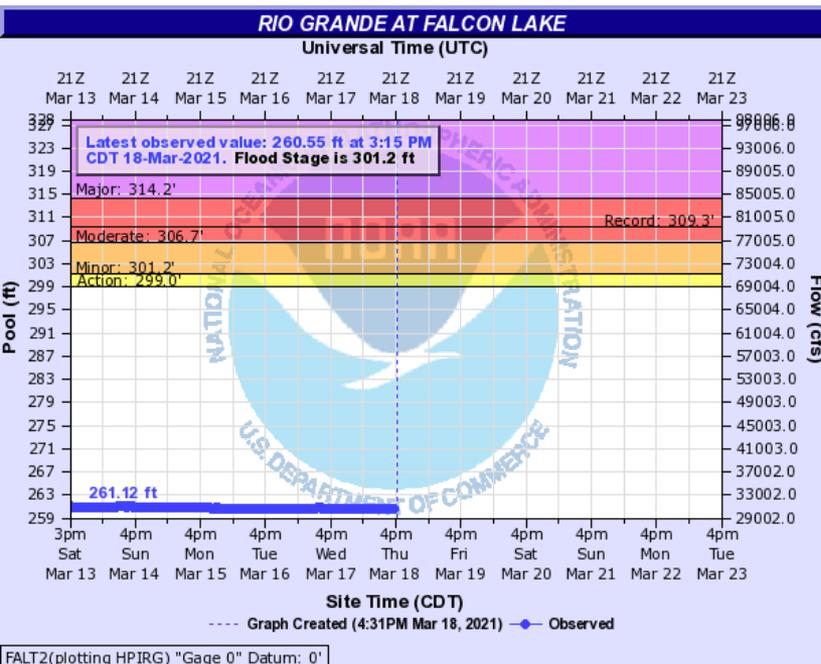
Conditions should become similar or worse than mid June 2011.

**Exceptional drought likely to expand eastward.**



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# Falcon Reservoir remained low in March 2021

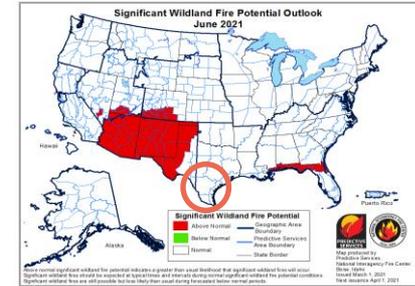
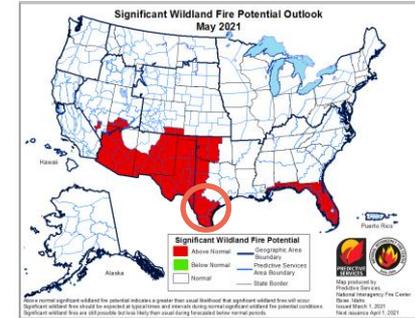
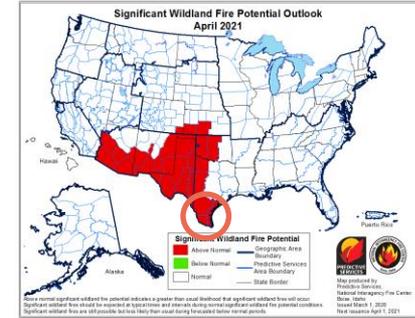


- Late March 2021 total capacity, Falcon Reservoir: **18 percent**
- March 2011 total capacity, Falcon Reservoir: around **94 percent**



# Wildfire Spread Potential Remaining **Extreme** in Spring 2021

- **Explosive spread conditions** are likely on days with northwest wind/warm to hot temperatures/very low humidity. A few more cases like that of March 17<sup>th</sup> are likely **through May**.
- Inland Ranch and Farm locations will remain at most risk. Wildfire spread **will depend on wind**, given that green-up will be spotty and potentially nil for many.
- Mid to Late June is a wild card, as local heavy rainfall from thunderstorm systems or a tropical wave cannot be ruled out.



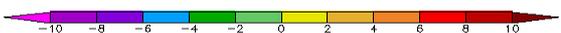
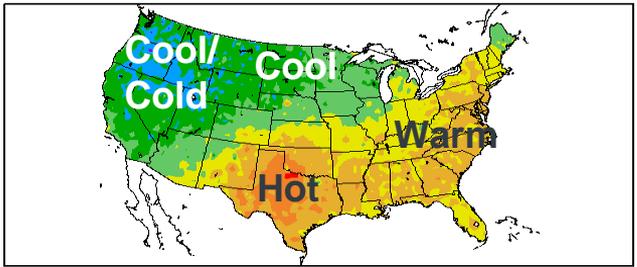
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# 2021 vs. 2011

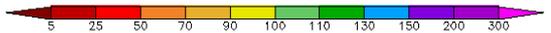
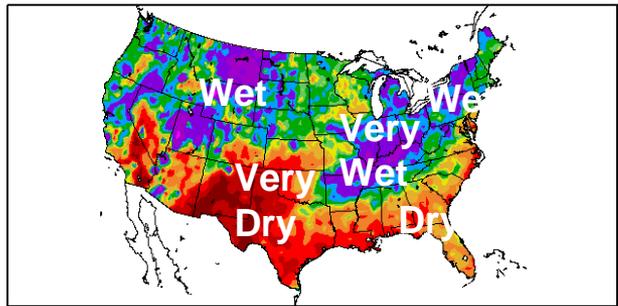
Departure from Normal Temperature (F)  
4/1/2011 - 6/30/2011



Generated 6/15/2012 at HPRCC using provisional data. Regional Climate Centers

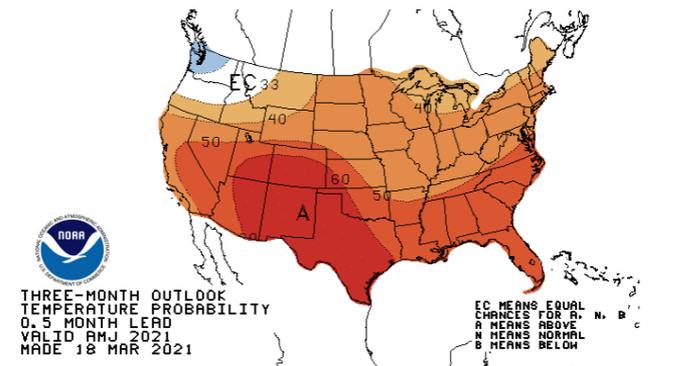
## Observed Mar-May 2011

Percent of Normal Precipitation (%)  
4/1/2011 - 6/30/2011



Generated 6/15/2012 at HPRCC using provisional data. Regional Climate Centers

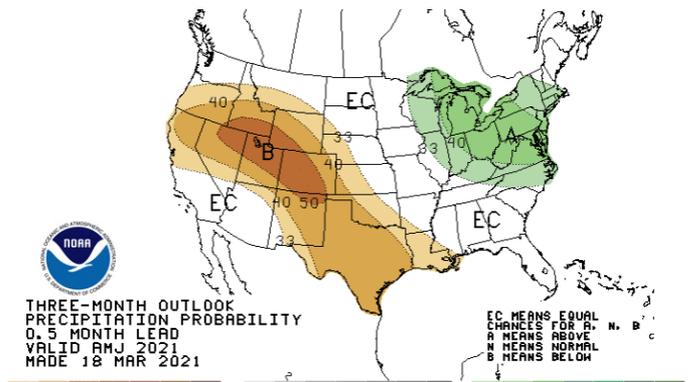
## Forecast Mar-May 2021



NOAA  
THREE-MONTH OUTLOOK  
TEMPERATURE PROBABILITY  
0.5 MONTH LEAD  
VALID RMJ 2021  
MADE 18 MAR 2021

EC MEANS EQUAL CHANCES FOR A, N, B  
A MEANS ABOVE  
N MEANS NORMAL  
B MEANS BELOW

Probability of Below: 40% 60% 70% 80% 90% 100%  
Probability of Near-Normal: 40% 50% 60% 70% 80% 90% 100%  
Probability of Above: 40% 50% 60% 70% 80% 90% 100%



NOAA  
THREE-MONTH OUTLOOK  
PRECIPITATION PROBABILITY  
0.5 MONTH LEAD  
VALID RMJ 2021  
MADE 18 MAR 2021

EC MEANS EQUAL CHANCES FOR A, N, B  
A MEANS ABOVE  
N MEANS NORMAL  
B MEANS BELOW

Probability of Below: 10% 40% 50% 60% 70% 80% 90% 100%  
Probability of Near-Normal: 40% 50% 60% 70% 80% 90% 100%  
Probability of Above: 40% 50% 60% 70% 80% 90% 100%

# May-July Outlook: Heat/Drought Hang On?

mcallen, tx

7 Day Forecast for McAllen, Texas

Three Category Temperature Outlook  
 Normal Maximum Temperature: **94**  
 Normal Minimum Temperature: **74**

Three Category Precipitation Outlook  
 Normal Precipitation: **6.76**

Select Lead ▾

## Seasonal Outlook

May 2021-July 2021 (Lead 2)

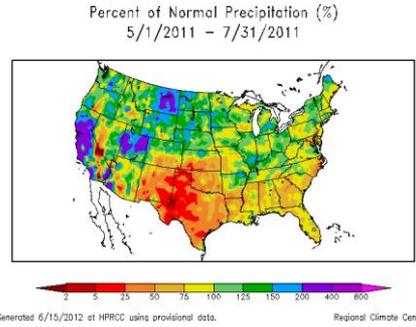
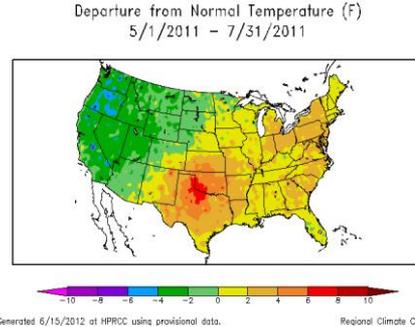
Temperature Opacity: 60% Precipitation

Outlook  Outlook

◀ Below Normal Above Normal ▶

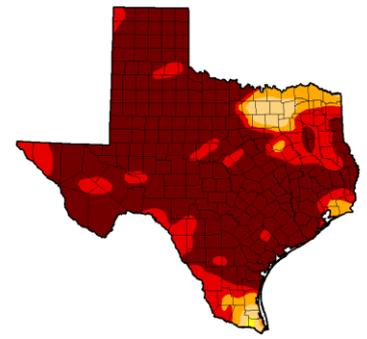
Monclova, Laredo, Nuevo Laredo, Reynosa, Brownsville, Monterrey, Saltillo, TAMAUlipAS

POWERED BY esri



### Drought Classification

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)



2021 Forecast, May-July (McAllen) – Updated 3/18/2021

Drought, July 26, 2011

# In Summary: Impacts and Actions

- Do **everything you can to promote wildfire prevention**, all spring long. Start at [weather.gov/safety/wildfire](https://weather.gov/safety/wildfire), [smokeybear.com](https://smokeybear.com), and [firewise.org](https://firewise.org).
- **Continuously update wildland management plans** as the explosive wildfire growth period continues this spring and into early summer 2021.
- Increasing confidence in **exceptional** drought for most of the Valley/Deep S. Texas region means **now is the time** to refine agriculture and municipal water plans in case of **water shortages**, which are now likely.
- Gear up for **early onset of summer-like heat**, particularly during April. Heat index, or “feels like” temperatures, could rise above 105 at times. This could cause heat stress in some people due to **lack of acclimation**.
- Actual temperatures – especially in low level west to southwest flow – could begin to repeatedly reach 100°F from Brooks/Hidalgo Counties out to Zapata. **Several 100°F afternoons are possible** from the end of April into May in many areas away from the coast.



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