NOAA June-August (Summer) 2021 Outlook Perspective for the Rio Grande Valley/Deep S. Texas Region

June 2, 2021

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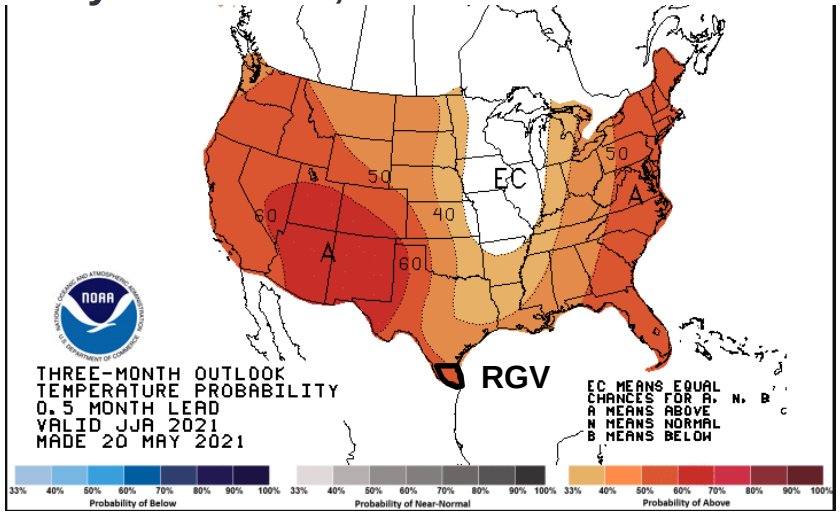
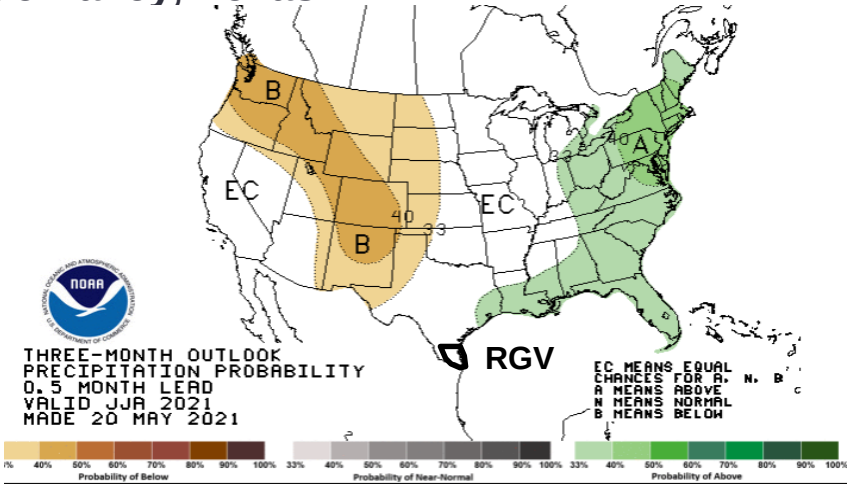


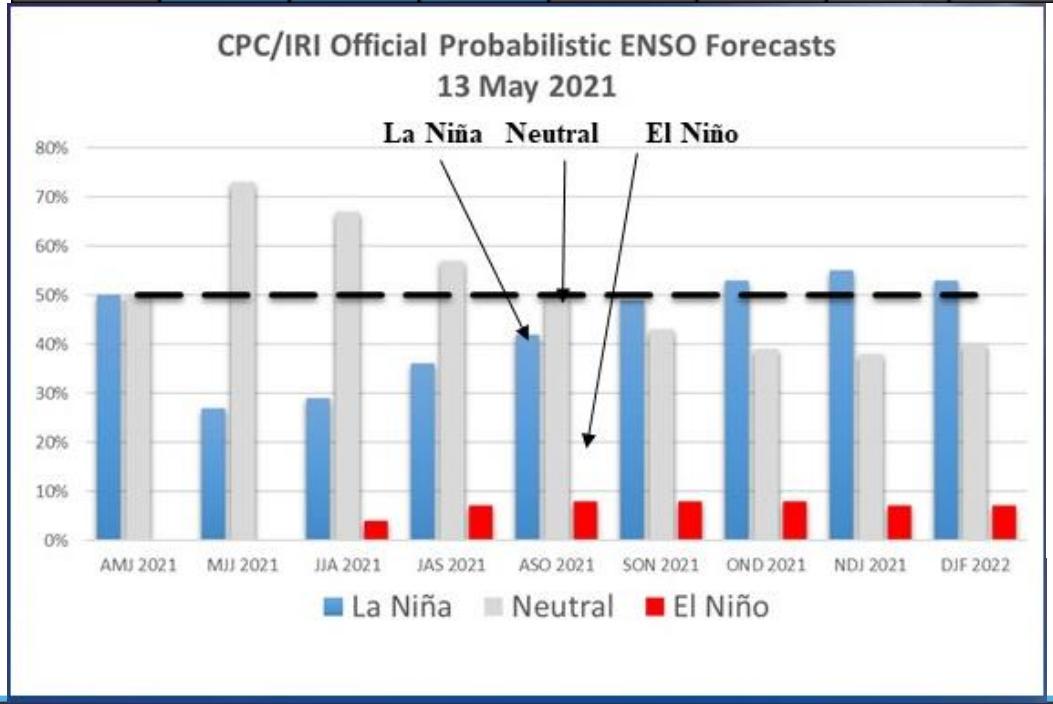


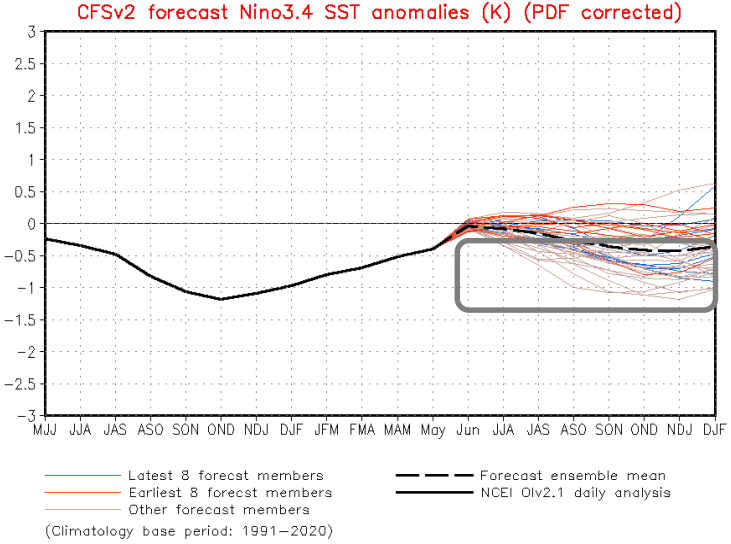
Key Takeaways

- Change in Pattern? Summer (June) starting wet, but will “La Canícula” return in force by July?
- Uncertainty high, confidence low in the seasonal forecast
  - **Predictive Difficulty** a combination of sharp change in pattern during May (into early June), followed by usual uncertainty in the start of peak hurricane season (August).
  - **Drought is “out”** through June, but **dryness and low-end drought** could resume in July and August
  - **Dangerous “feels like” temperatures could reach/exceed 110˚F** frequently in July and August
  - **Municipal and Agricultural** water supplies have been given a reprieve by “Top Ten” May rainfall and a wet start to June…
  - …but Falcon Reservoir **remains low to begin summer**, even with some pool rises compared with late April low points
  - Could 2021 provide the ***fourth* consecutive flood** event in late June or July? *Impossible to predict specifics of late June/July pattern development.*

The “Why” of the Forecast: Neutral-Weak La Niña

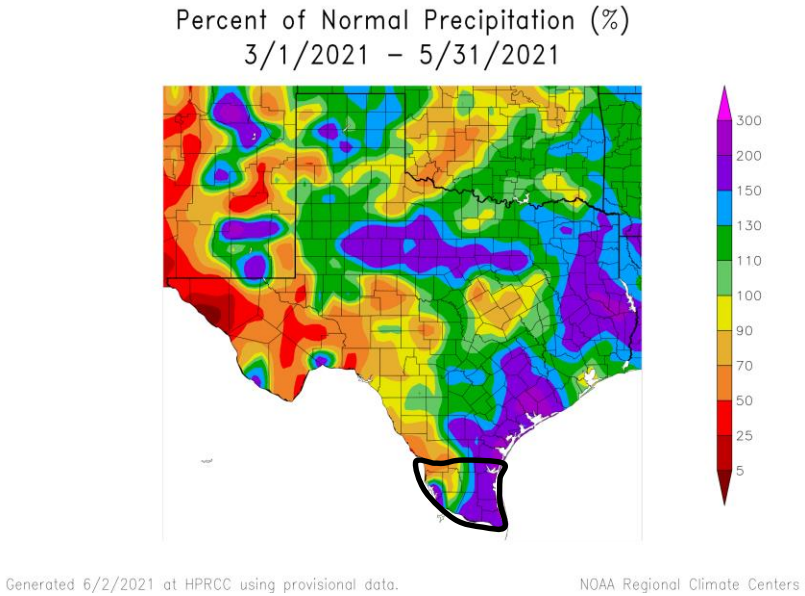
Year	DJF	JFM	FMA	MAM	AMJ	MJJ	JJA	JAS	ASO	SON	OND	NDJ
2020	0.5	0.5	0.4	0.2	-0.1	-0.3	-0.4	-0.6	-0.9	-1.2	-1.3	-1.2
2021	-1.0	-0.9	-0.8									

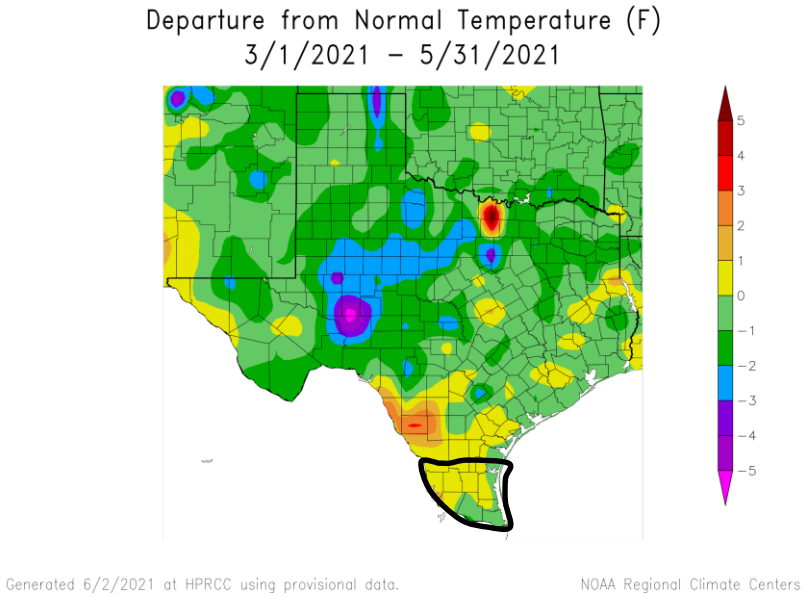




Neutral-Weak La Niña alone does not provide enough information for accurate summer rainfall forecasts

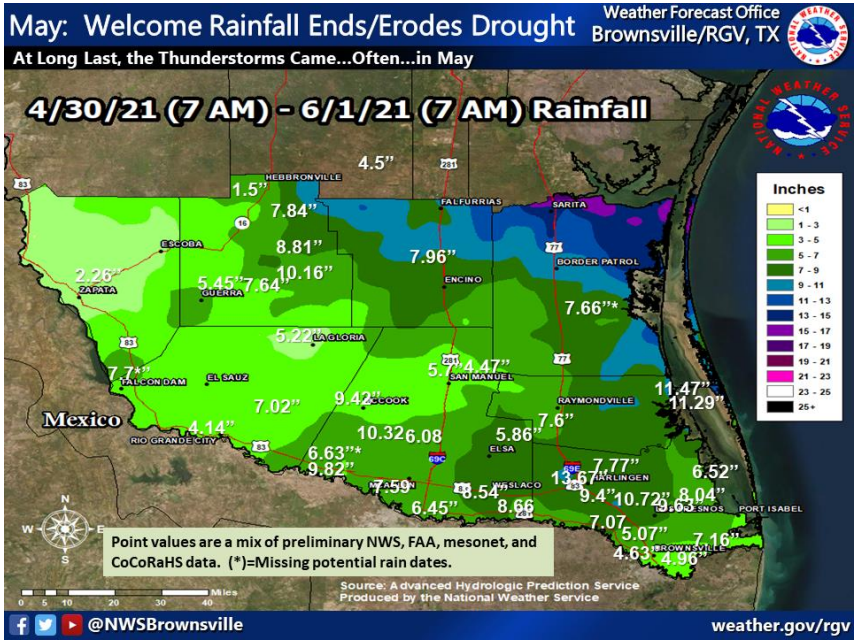
Dryness Flipped to Wetness near End of Spring





- March and April's very dry/relatively warm flipped to May's wet and "cooler" weather (except for the Rio Grande Plains)
- Temperatures slightly above average for the spring, but May pushed season back toward average
- Frequent "dry" fronts in March assisted rapid wildfire growth/spread; April's wildfire footprint was much less due to mitigation efforts despite more dry fronts. Weekly heavy rainfall events in May finished off the season

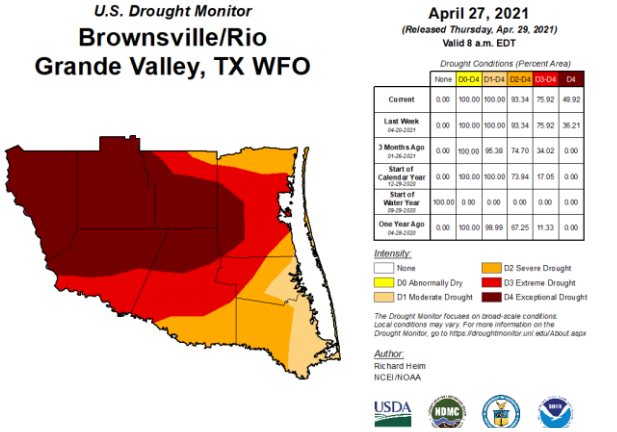
May Rain…

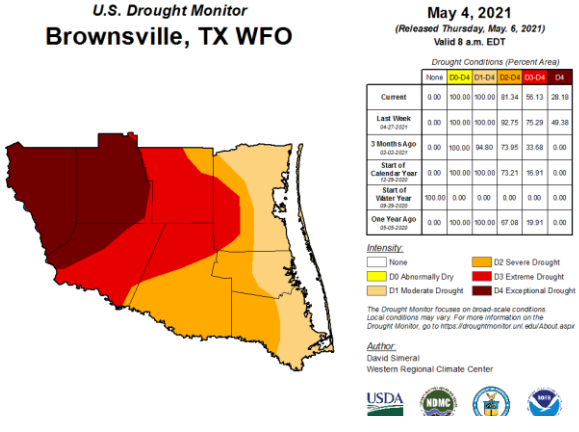


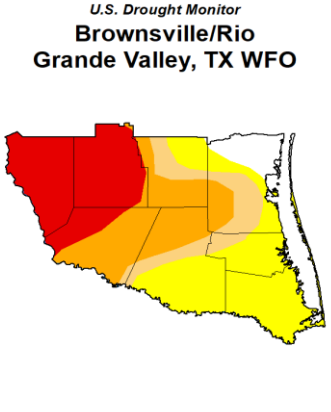
- **7 to 11 inches across the Valley**, extending northwest to Jim Hogg County, ended or sharply reduced the drought.
- May rainfall rankings: #3 McAllen, #1 Port Mansfield, #7 Falcon Dam (wettest)
- May average temperatures were limited by rain, clouds, and fronts. Values ranked close to the middle of the record for Valley stations

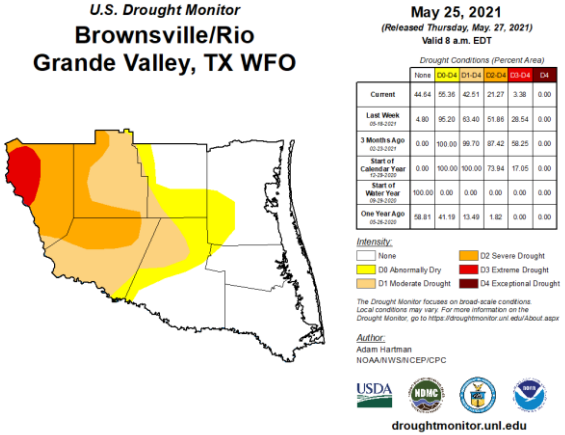
...Reduces/Removes Drought

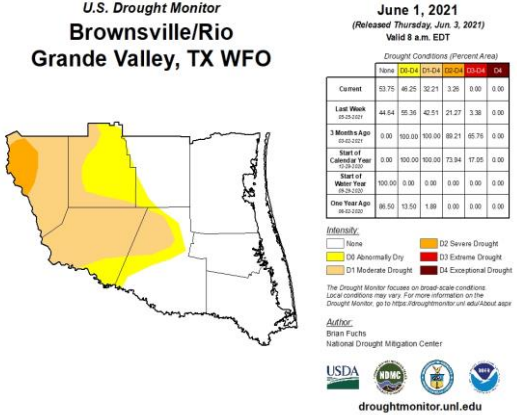
With each 1-3 inch rain event, drought improved. Jim Hogg/Zapata/Starr had to wait until early June to drop below severe (D2) levels (most areas)



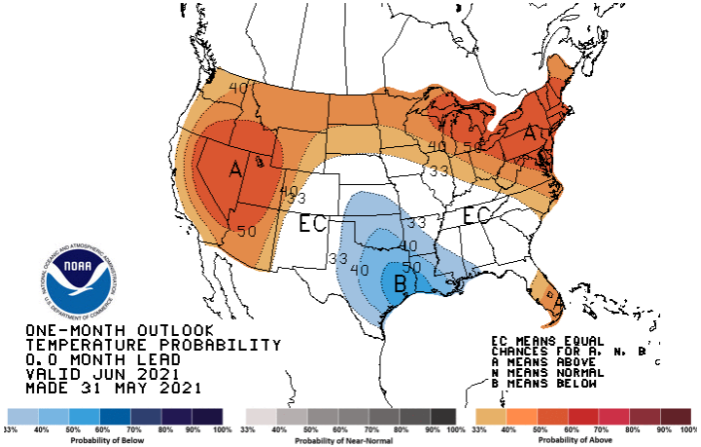


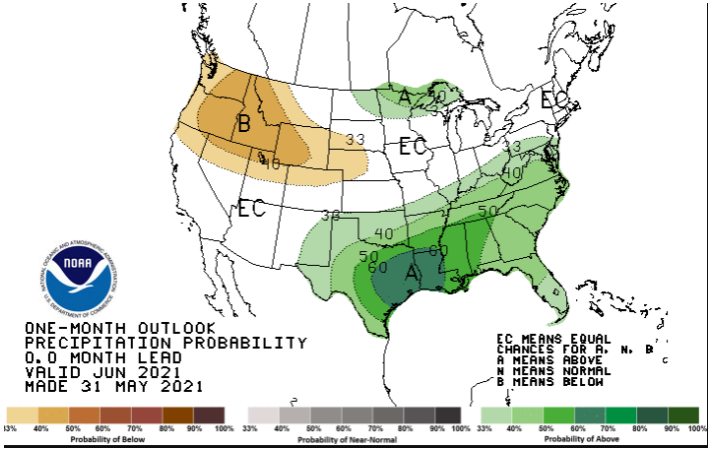




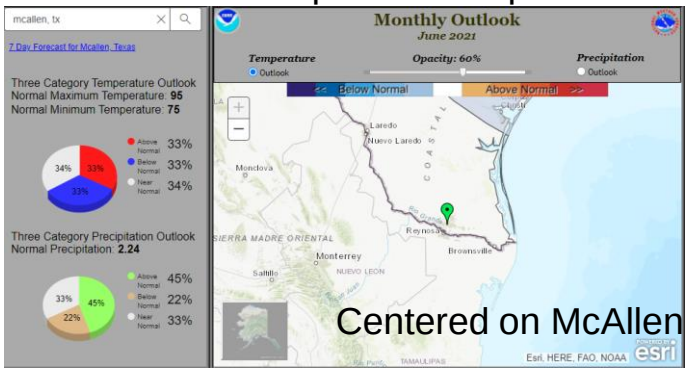


June Outlook – 5/31/2021 Update





Forecast Temperature Departure

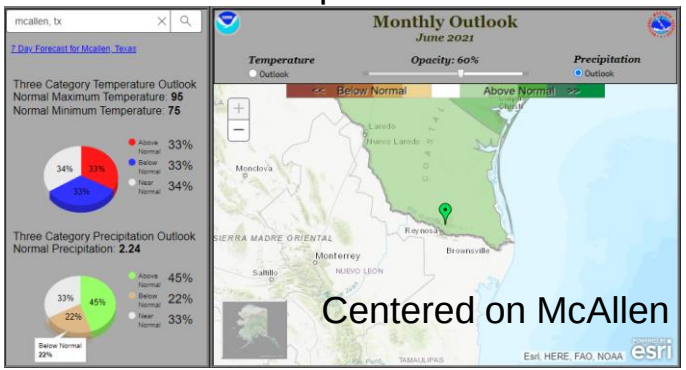


Avg. Afternoon Temp: Mid to Upper 90s

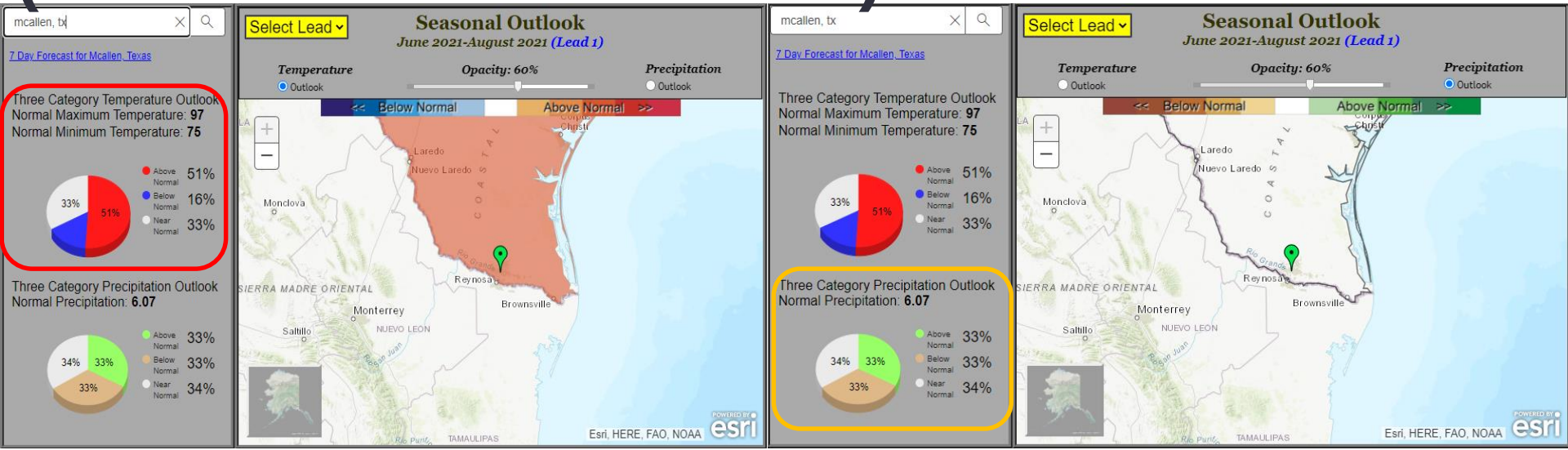
Avg. Morning Temp: Mid to Upper 70s

Avg. Rainfall: 2 to 3 inches

Forecast Precipitation Potential



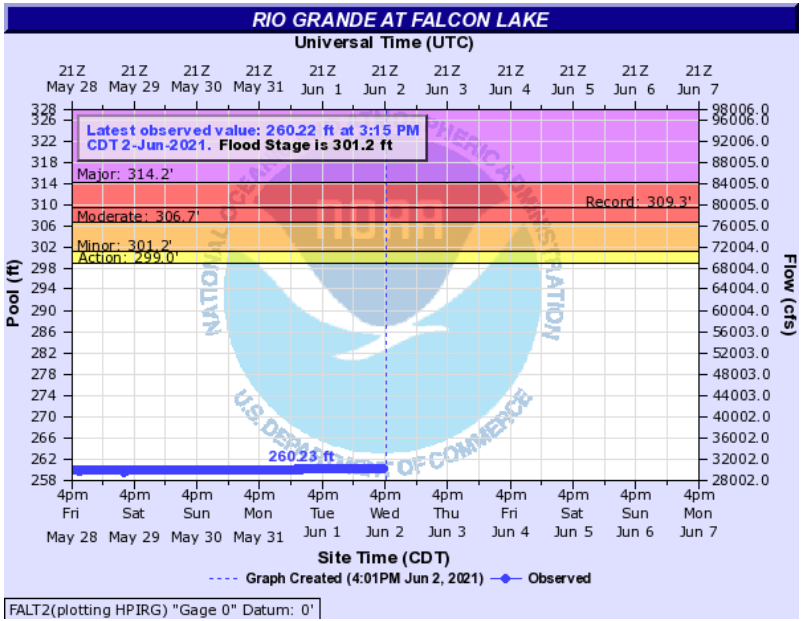
The Summer 2021 Outlook: Rio Grande Valley (McAllen as Anchor Point)

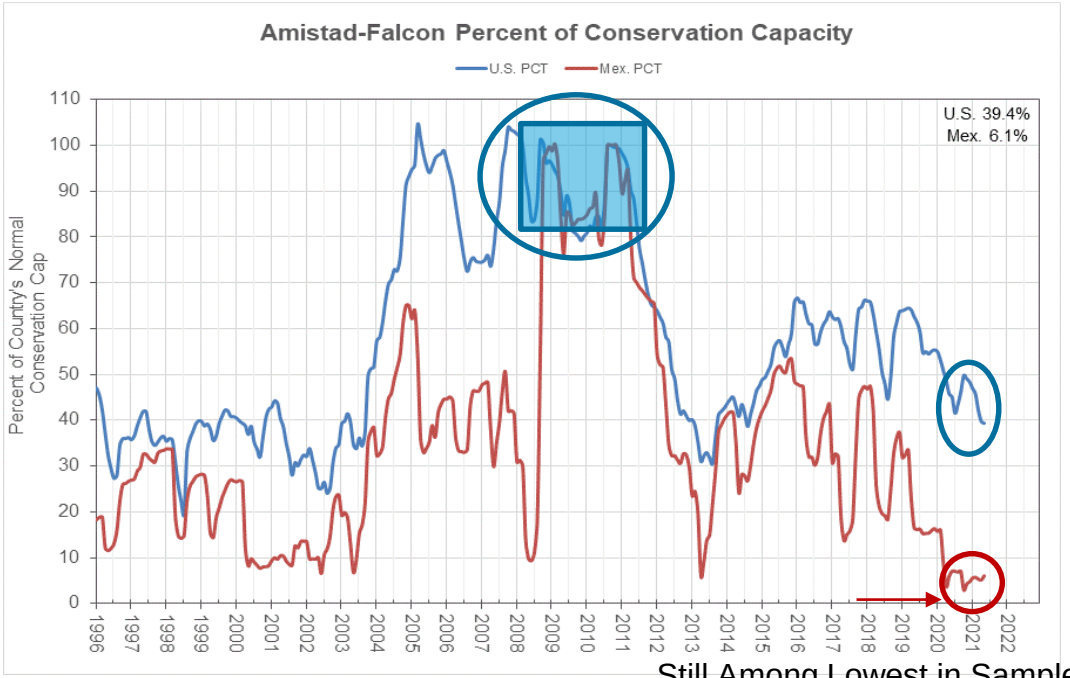


- **Temperature: A 51% chance of *above* average. Seasonal average – Afternoons, Rising from the mid 90s˚ (on 6/1) to 96-102˚ (on 7/10, continuing through 8/15). Mornings: Rising from the mid 70s (6/1) to the upper 70s (7/31-8/31). Just a 16% chance of below average in 2021.**
- **Rainfall: Equal Chances (~33% for all categories) Seasonal average: 6 to 7 inches of rainfall**

Falcon Reservoir Began Rising in May 2021…

…but still needs a lot more inflow to catch up



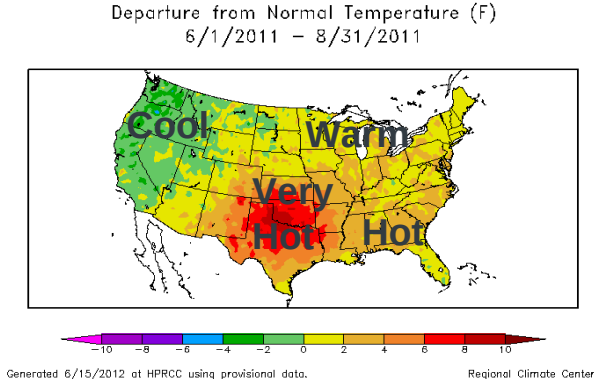


Still Among Lowest in Sample

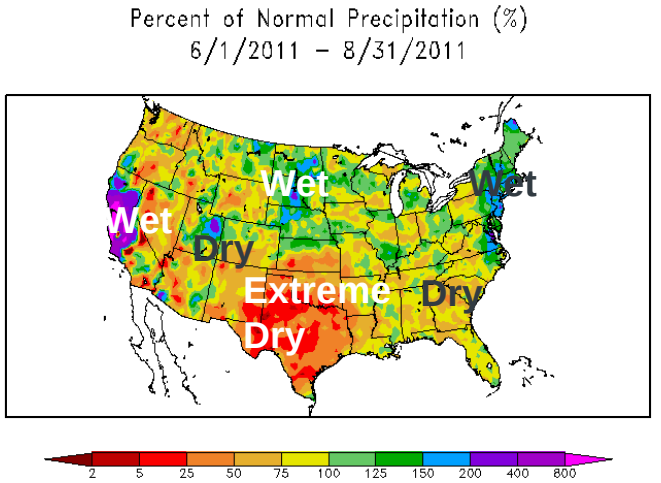
- June 1, 2021 total capacity, Falcon Reservoir: **17 percent**
- June 2011 total capacity, Falcon Reservoir: around **61 percent**

2021 vs. 2011

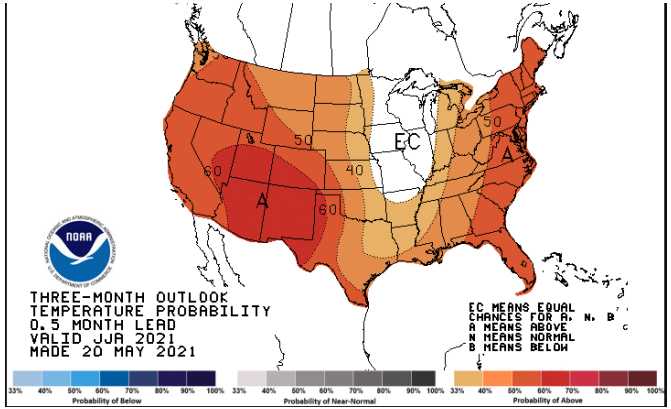
Uncertainty makes comparisons more difficult during summer months

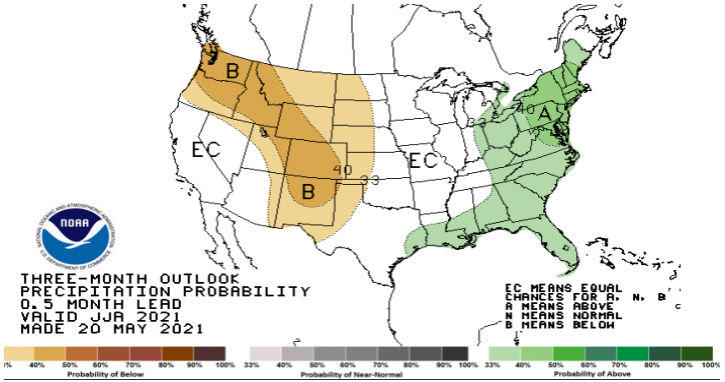


Observed June-August 2011

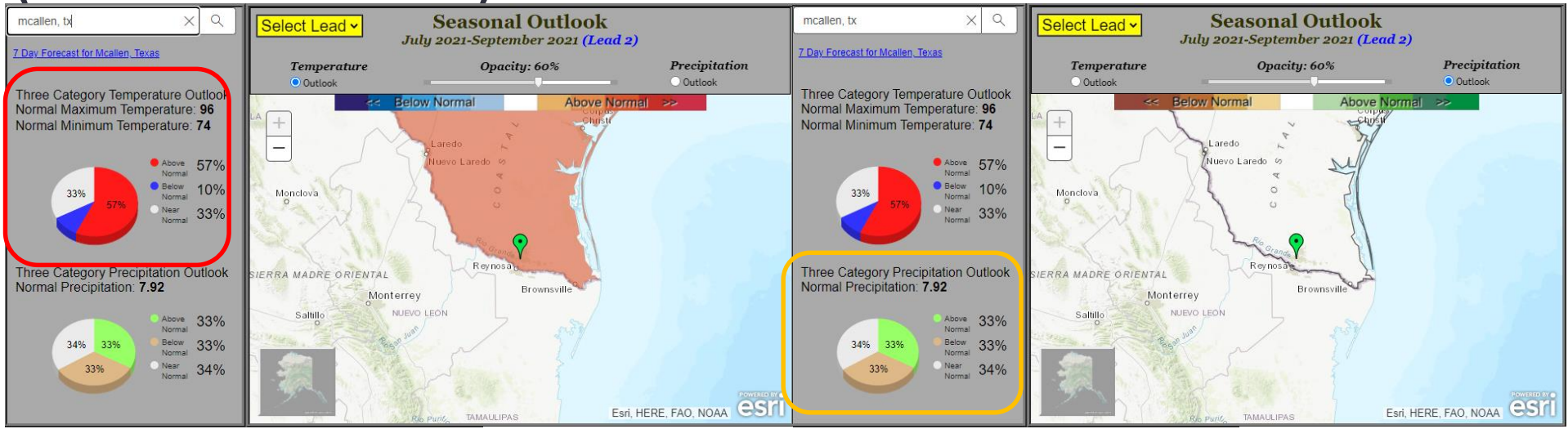


Forecast June-August 2021

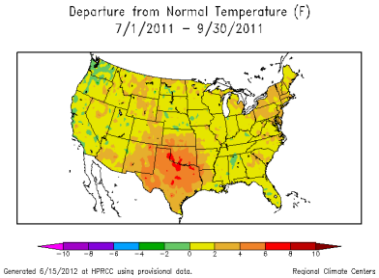




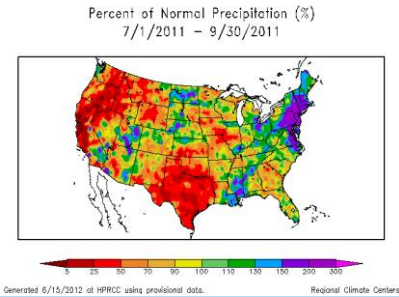
July-September Outlook: Uncertainty Reigns (or is that "rains"?)



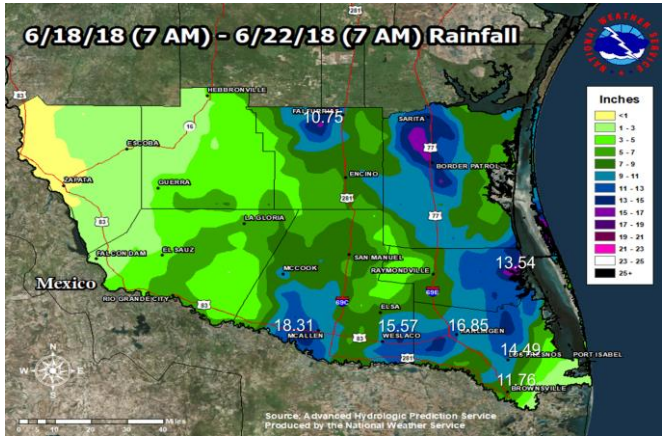
More confidence in warmer than average temperatures, though a 2011 repeat is looking unlikely given the summer 2021 starting point

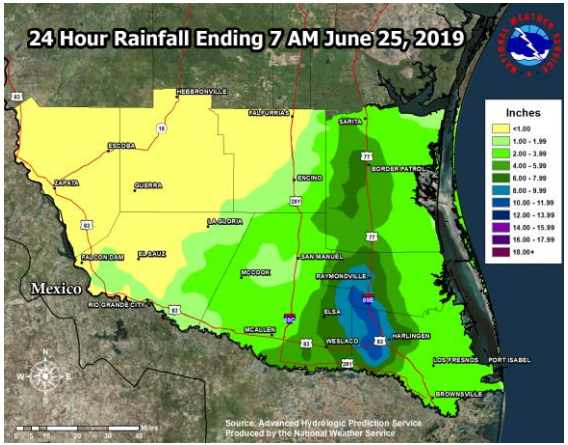


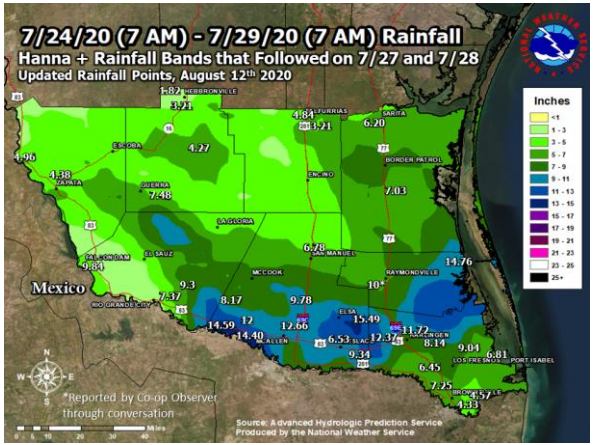
Low confidence in the rainfall forecast heading into the peak of the 2021 Hurricane Season. A strong and long "La Canicula" could return prolonged drying; position and strength of the ridge will be critical



Wildcard: Fourth Year in a Row?







In Summary: Impacts and Actions

- Very wet and relatively cool weather in May and early June have **temporarily removed drought and wildfire spread threat from the discussion**
- However, the potential remains for a rapid onset of "La Canícula" (Dog Days) conditions by late June, which could continue for much of summer
- Should La Canícula establish itself, benefits from May/June rainfall would be gone, and dryness/drought would resume in July and August. This could create a future wildfire growth/spread situation (late summer/autumn) given fuel "loading" from the May/June growth
- Should the upper ridge settle farther west, the door would open for an occasional influx of deep tropical moisture, particularly in August. Unknown is what the tropics might do along the Texas/northeast Mexico coast.
- Bottom lines? Prepare equally for the following:
  - **Dangerous summer heat** ("feels like" temperatures 110+) at times, especially from late June through mid August
  - **Flooding rains,** from tropical waves to potential cyclones (depressions to hurricanes)
  - **Wildfire spread**, should fuels dry out in mid summer heat and humidity/winds combine to enhance growth rates