



**NATIONAL
WEATHER
SERVICE**

July-September 2022 Outlook: Perspective for the Lower Rio Grande Valley/Deep S. Texas Region

June 24, 2022

Barry Goldsmith, NWS Brownsville/Rio Grande Valley, Texas

Any of the below is possible through September



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Since June 1st...

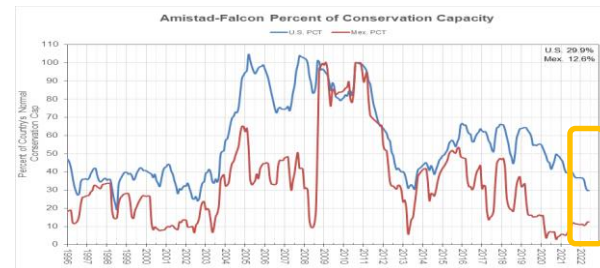
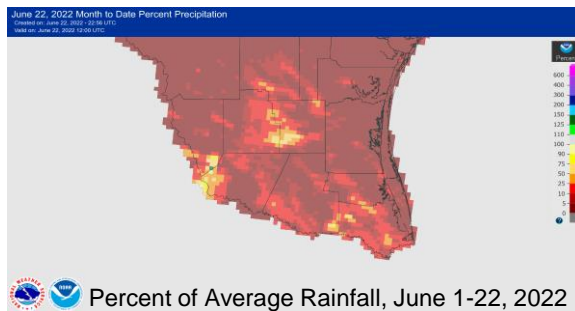
- The heat has maintained, and rainfall has been sparse. Despite temperatures being near the “warmer” 1991-2020 30-year averages, the total average from April 1-June 21 ranked among the top three hottest on record for the RGV anchor cities.
- Rainfall was only a fraction of average for the first two-thirds of the month, and dryness was beginning to return to some areas
- Water levels at Falcon International Reservoir and Amistad International Reservoir combined were **near their 30-year lowest levels.**

Maximum 82-Day Mean Avg Temperature for Brownsville Area, TX (ThreadEx)

Click column heading to sort ascending, click again to sort descending

| Rank | Value | Ending Date | Missing Days |
|------|-------|-------------|--------------|
| 1 | 83.0 | 2022-06-21 | 0 |
| 2 | 82.8 | 2011-06-21 | 0 |
| 3 | 82.3 | 2012-06-21 | 0 |
| 4 | 82.0 | 2020-06-21 | 0 |
| 5 | 82.0 | 2019-06-21 | 0 |
| 6 | 81.7 | 2017-06-21 | 0 |
| 7 | 81.5 | 2002-06-21 | 0 |
| 8 | 81.3 | 2006-06-21 | 0 |
| 9 | 81.2 | 1991-06-21 | 0 |
| 10 | 81.1 | 2018-06-21 | 0 |

Period of record: 1878-01-01 to 2022-06-21





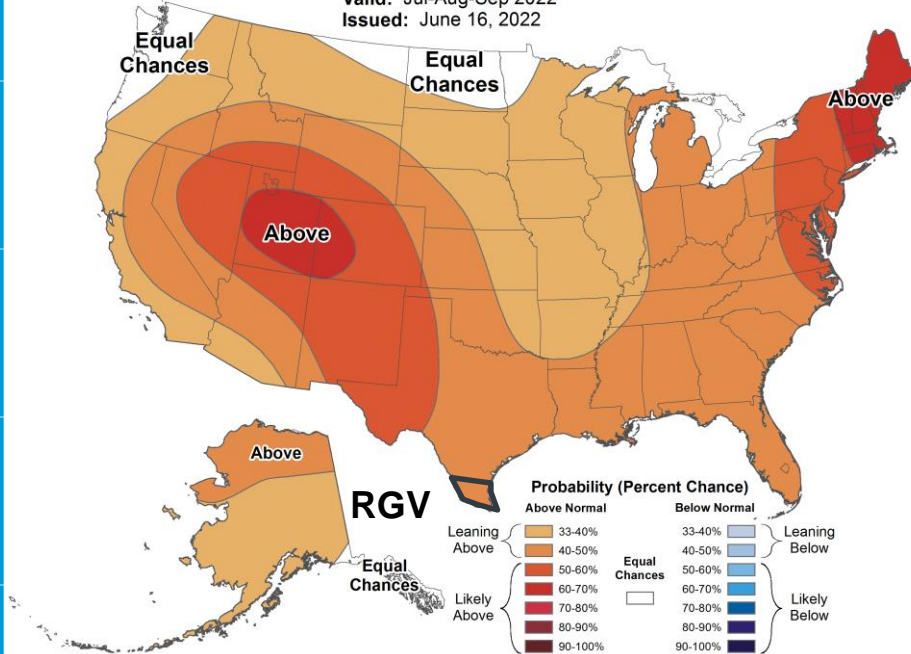
Seasonal Forecast July-September 2022 - USA



Seasonal Temperature Outlook



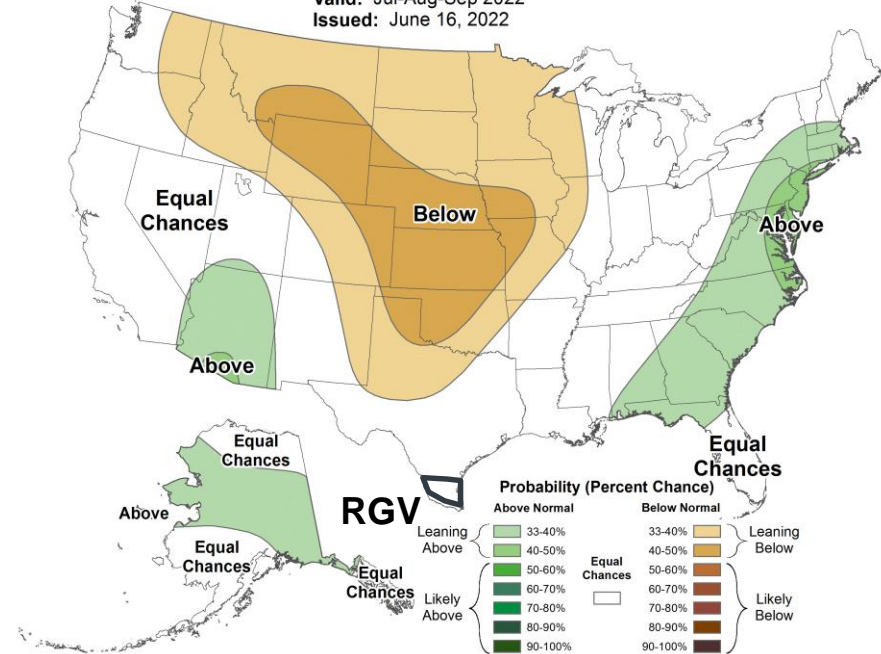
Valid: Jul-Aug-Sep 2022
Issued: June 16, 2022



Seasonal Precipitation Outlook



Valid: Jul-Aug-Sep 2022
Issued: June 16, 2022





Key Takeaways: July – September 2022



- **Above to average temperatures**, and a “lean” toward **below average rainfall continues...**
- **Confidence is high** on a **hot summer**, but rainfall remains “wild card” due to tropical potential
 - **Excessive Heat**, even by Valley standards, **may be a recurring theme**. If rainfall fails to materialize and the pattern that dominated most of May and early June prevails, 100°F+ temperatures are likely on many days west of IH-69E. Periodic humidity could push apparent temperatures 111°F and 120°F – locally higher, on more than ten days.
 - **Tropical “wild cards”** are possible just about anytime from late June through August, in the form of cyclones or energy waves. **Without them, drought will quickly redevelop across all but the immediate coast**. **With them, flooding** (and worse) is likely. Early [July 2021](#) and [Hurricane Hanna](#) (July 2020) stand out.
 - The regrowth of grasses, brush, and trees following the late May deluges, followed by prolonged hot, dry, and breezy conditions through summer, could renew the threat for **rapid wildfire spread/growth**. Areas under highest threat would be **along and west of IH-69C from Brooks/Hidalgo to Zapata**.





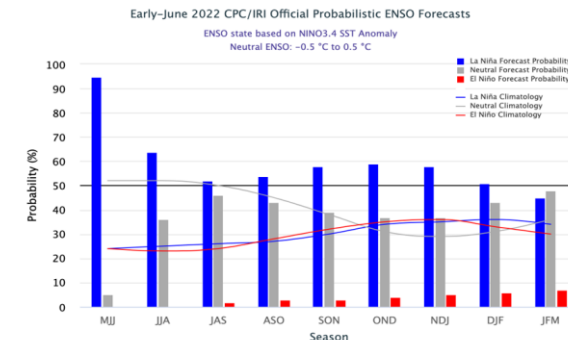
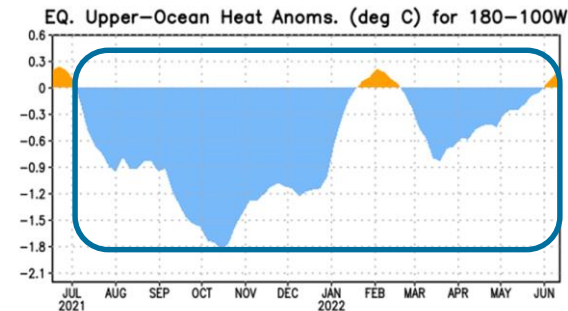
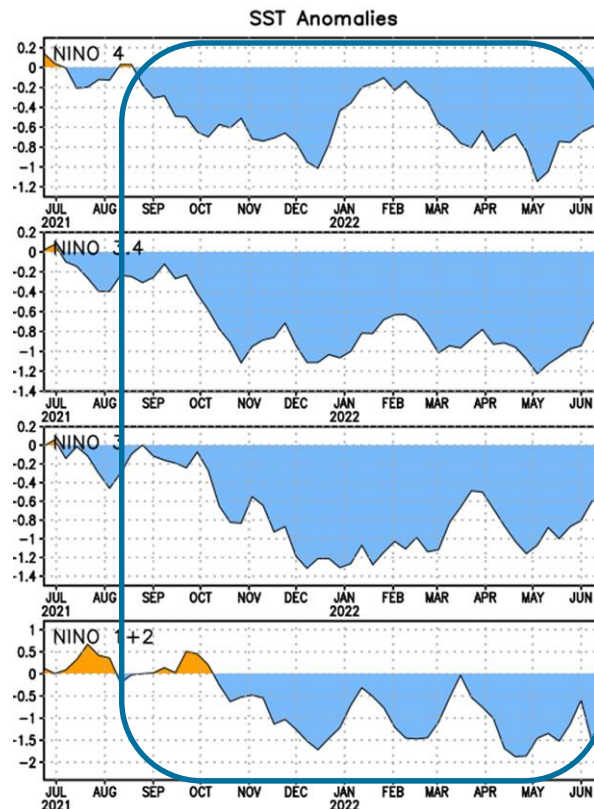
The “Why” of the Forecast:

El Niño/Southern Oscillation (ENSO) (still) in La Niña Phase

| Year | DJF | JFM | FMA | MAM | AMJ | MJJ | JJA | JAS | ASO | SON | OND | NDJ |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 2021 | -1.0 | -0.9 | -0.8 | -0.7 | -0.5 | -0.4 | -0.4 | -0.5 | -0.7 | -0.8 | -1.0 | -1.0 |
| 2022 | -1.0 | -0.9 | -1.0 | -1.1 | | | | | | | | |

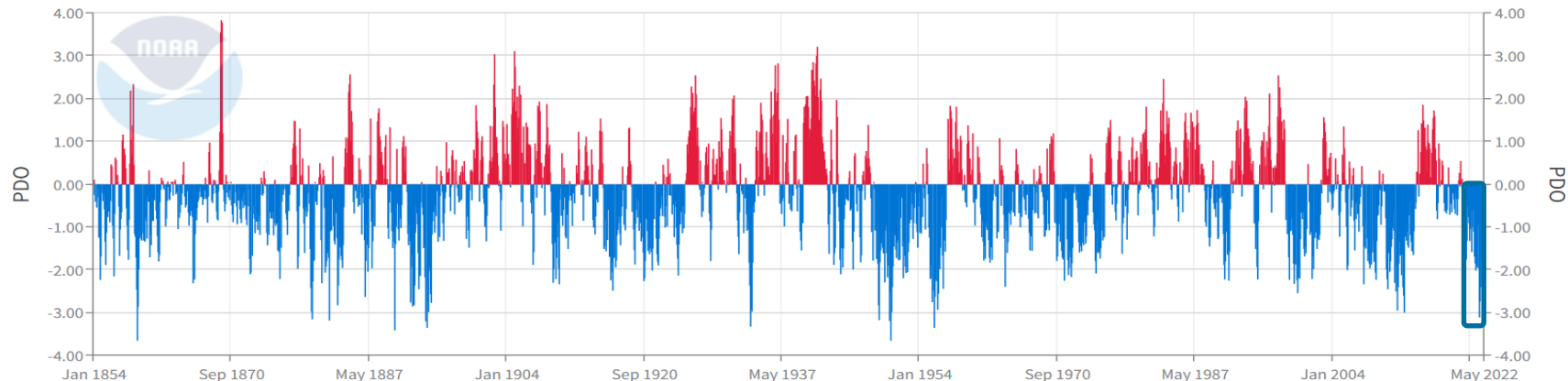
- La Niña remains stubborn, and is now expected to remain the dominant signal into late summer, with only slow weakening
- The stout late spring/summer La Niña combined with general atmospheric patterns and other “teleconnections” generally leans toward hot and dry/drought conditions...
- ...but La Niña and other factors also support potential for tropical cyclones.

*Above right: Oceanic Niño Index. Values below -0.5 (light blue) indicate a 3-month La Niña episode.



The “Why” of the Forecast: Pacific Decadal Oscillation (PDO) in Negative Phase

Pacific Decadal Oscillation (PDO)



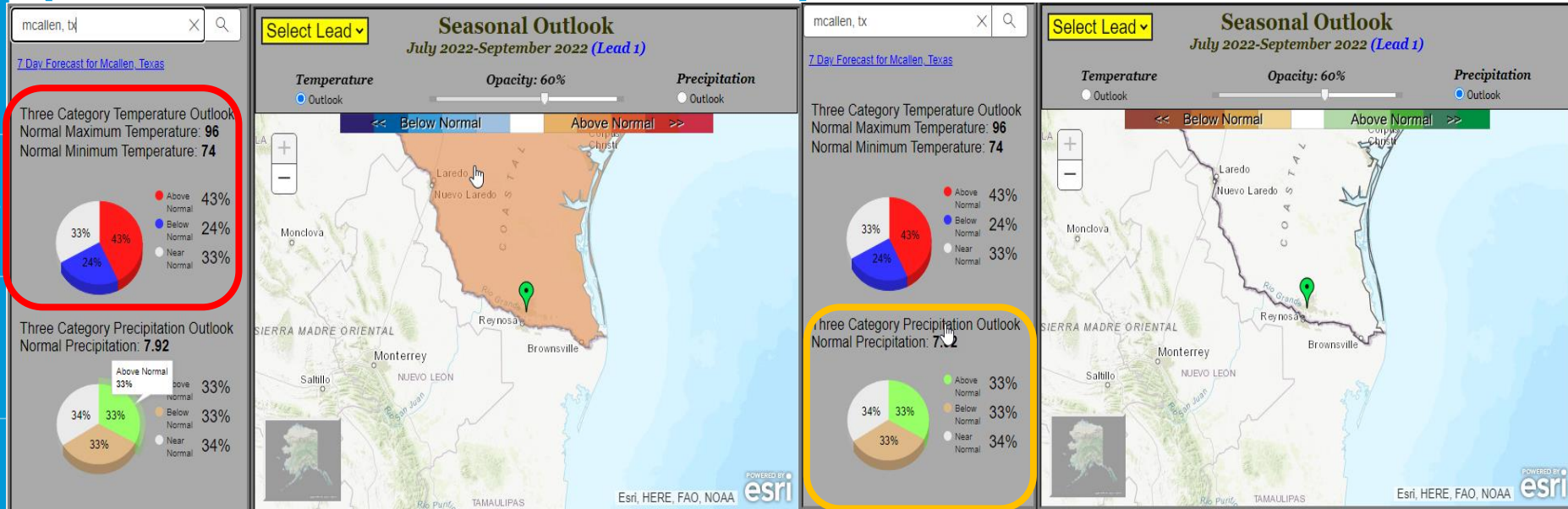
Source: <https://www.ncei.noaa.gov/pub/data/cmb/ersst/v5/index/ersst.v5.pdo.dat>

Powered by ZingChart

- The 2021/2022 prolonged negative PDO remains similar to that of late 2010 through 2011. Combined with the persistent La Niña – also very similar to that from late 2010-2011 (though 2011 was a bit stronger), **confidence remains high on a continued hot summer 2022.**
- Still, summer remains a **rainfall wild card**: First, oceanic/atmospheric combinations favor an active Atlantic Hurricane season with some potential for other tropical waves; second, April and May 2022 each had “one-off” events that turned dry to flood and alleviated drought in the RGV.



The Summer 2022 Outlook: Rio Grande Valley (McAllen as Anchor Point)

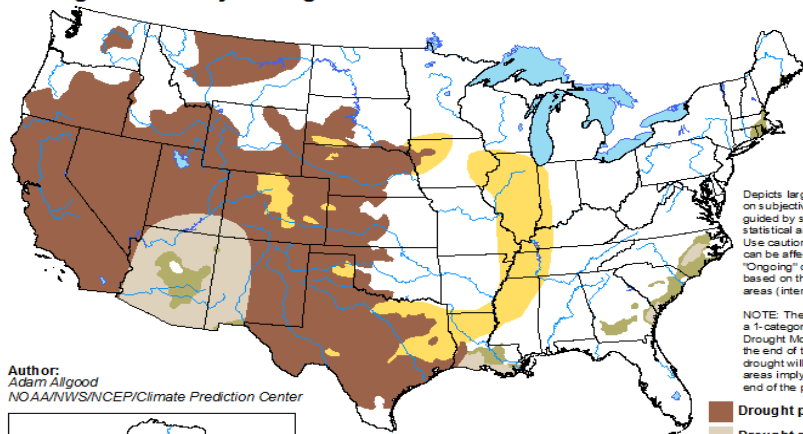


- Temperature: A 43 percent chance of above average. RGV averages (daytime): Upper 90s to 100+
- Precipitation: Equal chances (~33.3 percent of all three categories), RGV averages: 8.5 to 10 inches.
- Of note: Average temperatures rose ~2 degrees for the 1991-2020 sample, making it more difficult to forecast a late summer value much above this.

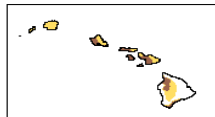
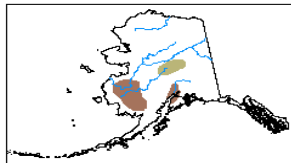
The Summer 2022 “Droughtlook”

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

Valid for June 16 - September 30, 2022
Released June 16



Author:
Adam Allgood
NOAA/NWS/NCEP/Climate Prediction Center



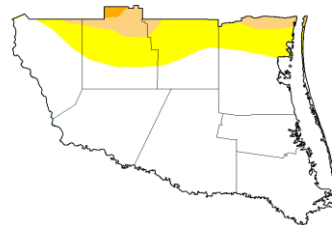
Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to 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).

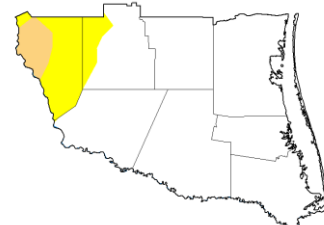
- Drought persists
- Drought remains but improves
- Drought removal likely
- Drought development likely



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



June 21, 2022



June 22, 2021

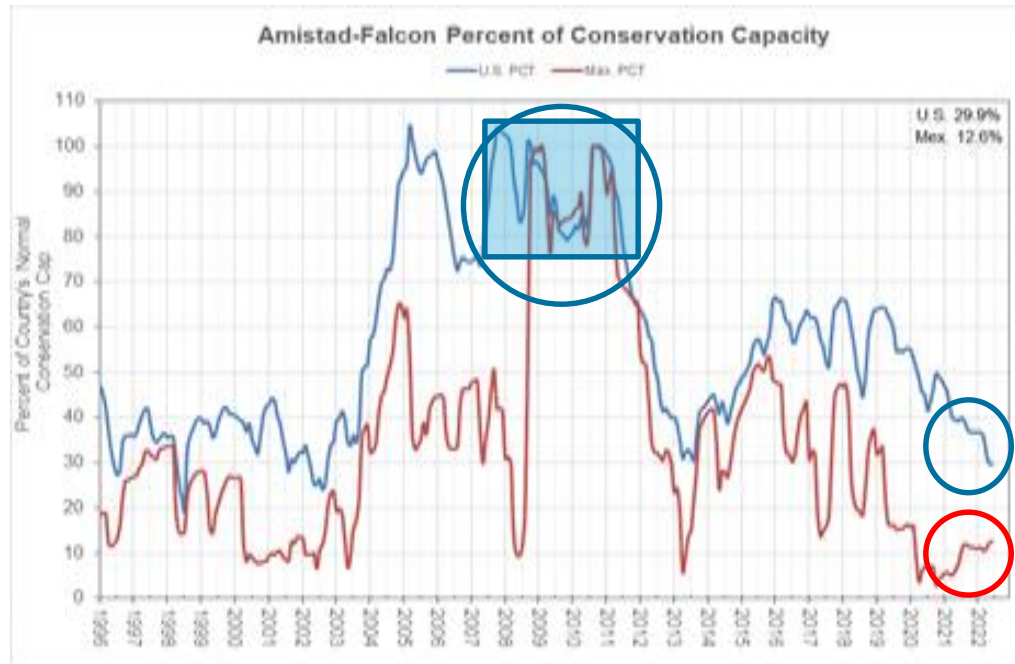
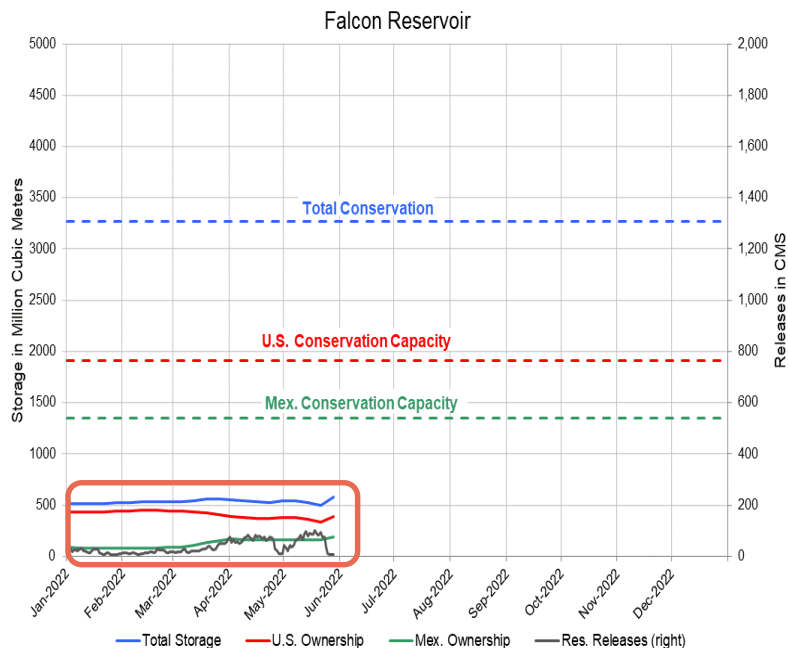
Drought Classification

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)
- No Data

- If “wild card” or tropical rains do not occur, **drought** is likely to **return to portions of the Rio Grande Valley/Deep S. Texas in summer**. Best chance for severe to extreme drought is from Hidalgo/Brooks through Zapata.
- Summer rains are a “wild card”. If **rains come as they did in June/July 2018-2021**, drought will be unlikely. If **they don't come, moderate to extreme conditions** will return, with worst conditions across the Brush Country/Rio Grande Plains.



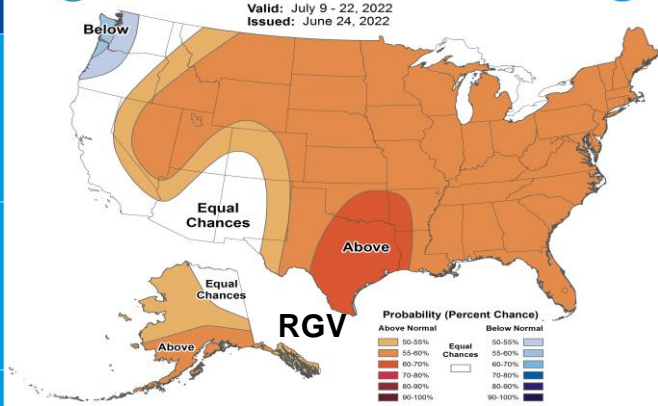
Falcon Reservoir Only a Tad Above 30-year Lows, at start of June 2022



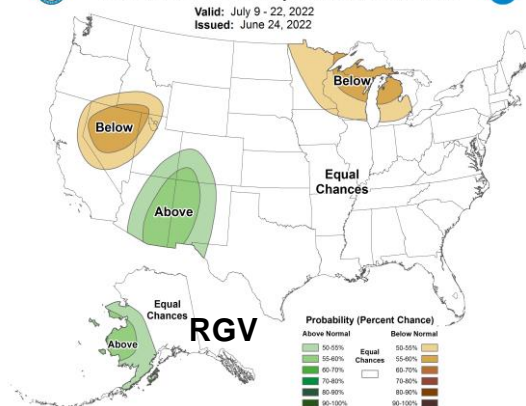
- Late June 2022 total capacity, Falcon Reservoir: **15 percent**
- Late June 2011 total capacity, Falcon Reservoir: **59 percent**

July 2022: Confidence High on Heat, Medium on Rainfall

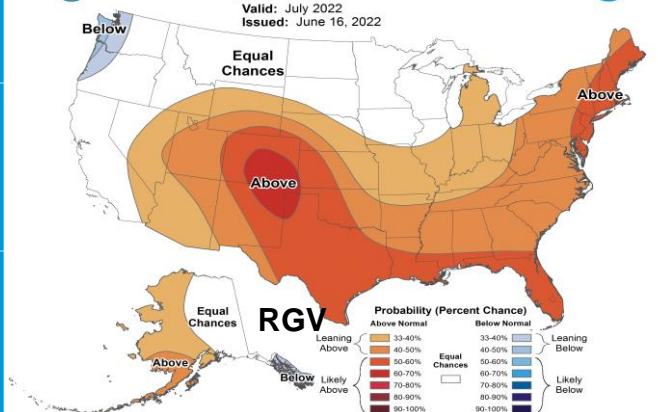
Weeks 3-4 Temperature Outlook
Valid: July 9 - 22, 2022
Issued: June 24, 2022



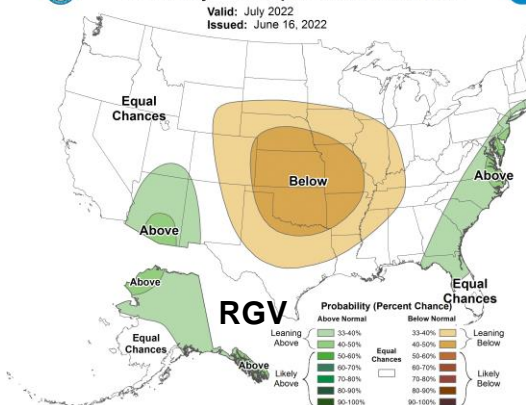
Weeks 3-4 Precipitation Outlook
Valid: July 9 - 22, 2022
Issued: June 24, 2022



Monthly Temperature Outlook
Valid: July 2022
Issued: June 16, 2022

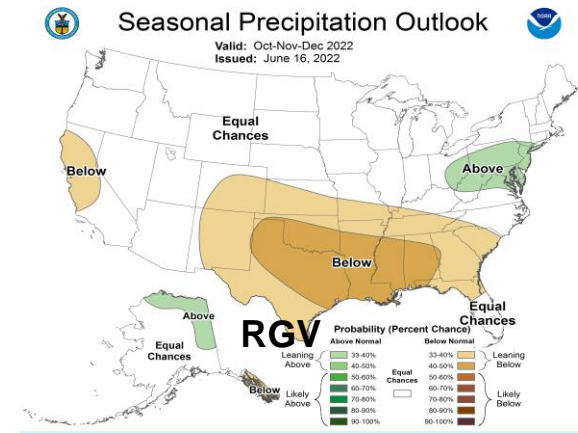
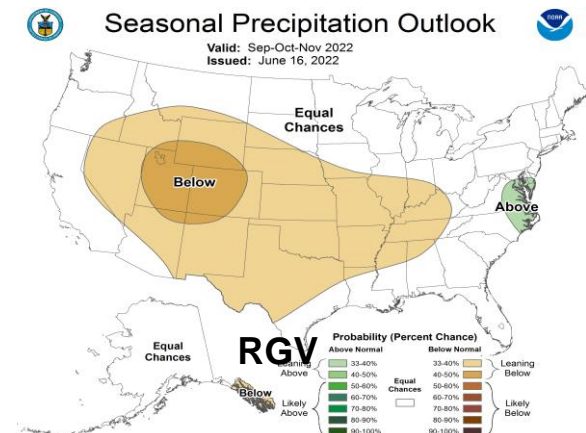
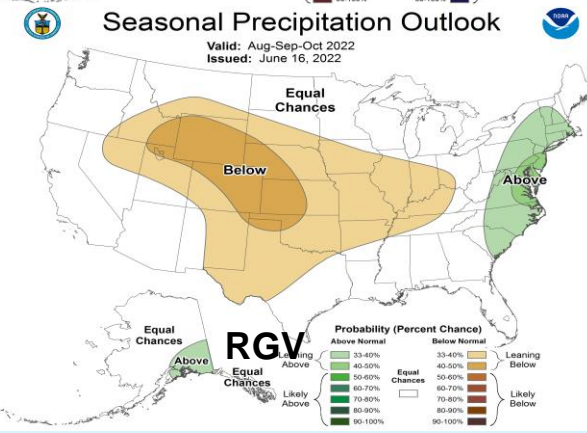
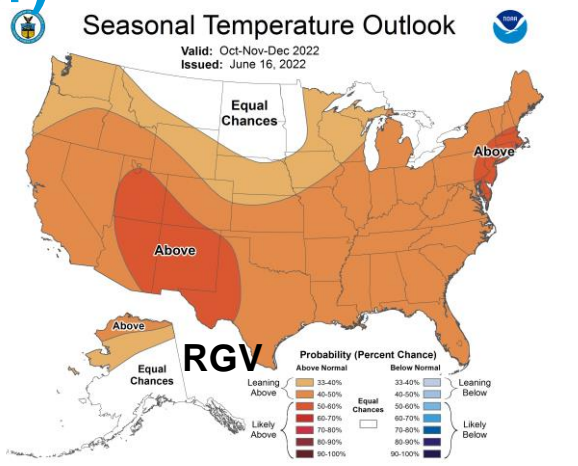
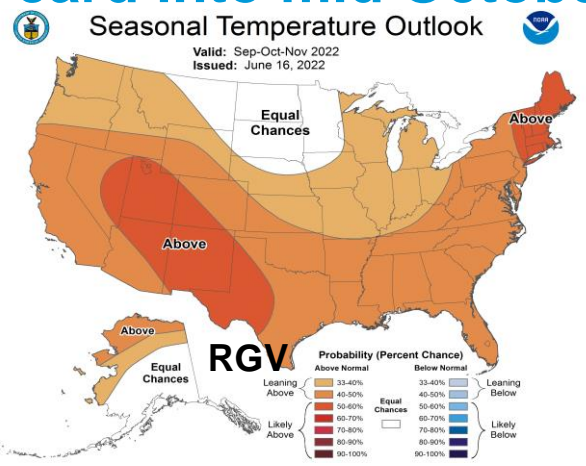
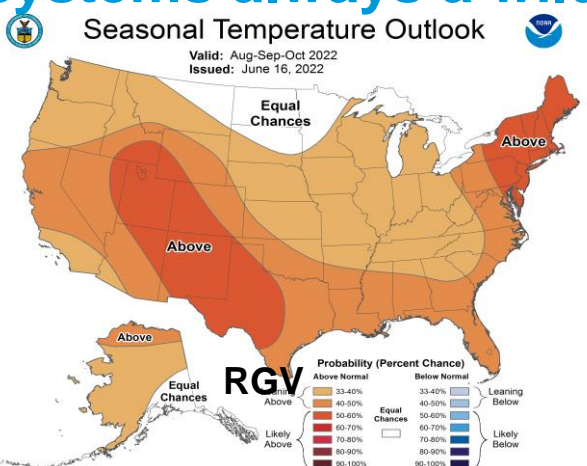


Monthly Precipitation Outlook
Valid: July 2022
Issued: June 16, 2022



- **Bottom Line:** Through late July, hotter than average temperatures should prevail. Rain will depend on if any tropical/related development occurs – otherwise, this is typically one of the drier periods of the year. **Drought/dryness will gradually spread back across the Lower Rio Grande Valley if little to no rain falls during this period.**
- There were modest indicators for some type of tropical development in the northwest Gulf just before the end of June. Thereafter, dry and hot conditions looked likely to begin July.

Autumn 2022: Continued Hot; A Dry Lean Continues (tropical systems always a wild card into mid October)



Bottom Lines

- **Heat** should be dominant through summer, perhaps setting the stage for *another high-ranked warm calendar year* should much warmer than average conditions persist through the rest of 2022. **Heat safety** should be promoted frequently.
- **Agriculture and municipal water shortages will increase** with high evaporation, lack of significant rainfall, and very low water levels in Falcon Reservoir, through summer **if no rain falls into municipality water systems or into Falcon Reservoir**. "[La Canícula](#)" is always a possibility, but confidence is low on exact positioning of the atmospheric high pressure ridge. **Conservation, smart irrigation, rainwater harvesting, etc. are still worth consideration.**
- **Drought is likely to reset to severe to extreme mainly west of IH 69/US 281** by mid summer if no "just-in-time" rain falls. **Moderate to Severe drought** would extend east toward Cameron/Willacy/Kenedy in this case. Green will turn back to yellow/brown across all regions in this case.
- **Late Summer 2022** remains a "wild card" for **torrential rain and flooding**. As events since 2018 have shown, it only takes a day or two to shift from drought to flood in the Rio Grande Valley – and that potential exists this season. Depending on the timing, torrential rain could be a boon or a disaster for summer agriculture. Hanna's rains in 2020 wiped out much of the region's extensive cotton crop; early July rains in 2021 were helpful to that year's crop.