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Overall Dryness to Continue; Warm Temps With A Few Cold Snaps

From This…
N. Zapata County
Kenedy County

…To This?
Falcon Dam and State Park
McAllen
Since October 1st...

A drier than average month, in general; exceptions include Zapata, western Starr, and western Jim Hogg

Temperatures varied with early month comfort, mid-month summer-like warmth, and the first legitimate cold front on the 18th. Through the entire period, temperatures were near the 1991-2020 average.

The near normal temperatures allowed the April 1-October 20 rankings to dip, but just slightly. Near-record warmth continued for the period. Brownsville, #2; Harlingen, #3; McAllen, #9 (updated on 10/20).

Combined water levels at Falcon International Reservoir and Amistad International Reservoir continued to edge up (right); Amistad more than Falcon due to steady inflows from the Rio Conchos (next page).
Amistad Maintained Slow Rise into October

- Rio Conchos Reservoirs are lower than September, but still at or above 100 percent conservation storage.

- Slow rises will continue at Amistad until early November, but a slow drop to resume at Falcon by early November.

- Levels remain very low at Falcon and this will continue through winter.
Key Takeaways: Nov. 2022 – Jan. 2023

- **Above average temperatures**, and confidence for **below average rainfall continues**...
- **Confidence is high** on a **warm and dry end to 2022**.
- The potential for a **breakthrough freeze/extreme cold event** increases in **January**.
- Breakdown:
  - **Persistent Warmth** which began in April will continue through the end of the year.
  - Reservoir levels at Amistad continued a slow rise in October, but Falcon leveled off and fell a bit in October. **Falcon will begin to fall slowly** from through December and a bit less so in January. Amistad will level off in November and begin a slow fall thereafter. **Water supply issues will remain a concern for many Valley locations.**
  - The expectation of much drier, but still warm, air following ample “fuel” growth of grasses and brush across the region between mid August and mid September could set up **potential fire weather issues by late November and especially December and possibly into January**.
  - While the pattern overall favors warm and dry conditions, occasional cold fronts will continue to arrive. Several **fronts could be strong, dropping “feels like” temperatures below 40°F** – with a **potential day-to-day change of up to 50°F**. The best opportunity would be after Thanksgiving.
  - **One to three freezes are possible in January, similar to 2021**. A **hard freeze** – temperatures below 28°F for more than 2 hours – cannot be ruled out.
The “Why” of the Forecast:
El Niño/Southern Oscillation (ENSO) solidly in La Niña Phase

- **La Niña** will remain the dominant signal into early spring 2023.
- The stout La Niña combined with general atmospheric patterns and other “teleconnections” still leans toward warm/hot and dry/drought conditions…
- …but La Niña can also support notable cold snaps toward the end of the calendar year and especially during early 2023.

*Above right: Oceanic Niño Index. Values below -0.5 (light blue) indicate a 3-month La Niña episode. Current La Niña expected to last up to 18 months.*
The “Why” of the Forecast: Pacific Decadal Oscillation (PDO) in Negative Phase

- The 2021/2022 prolonged and strong 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 warm November-December.
- The same PDO when combined with the strong and persistent La Niña, maintains confidence in a dryer than average end of 2022 and start of 2023.
- And, similar to 2011, 2021, and 2022, the potential for sharp cold snaps and freezes embedded within the warmer pattern increases for the start of the calendar year (Jan-Feb, 2023).

The Nov. 2022 – Jan. 2023 Outlook: Rio Grande Valley (McAllen as Anchor Point)

- **Temperature:** A **48 percent chance of above average.** A 19 percent chance for below average: RGV averages: Afternoon – Lower 80s, falling to around 70-lower 70s by the end of December through January. Morning: Lower 60s, falling to 47 to 52 by the end of December through the end of January.
- **Precipitation:** A **59 percent chance of below average;** 8 percent for wetter than average. RGV averages: 2.7 to 4.5 inches (from west to east).
• Dryness increased gradually in October 2022, and Moderate to locally Severe Drought (D1 to D2) is now expected to cover all of Rio Grande Valley/Deep S. Texas Brush and Ranch country by the end of January. Severe to Exceptional Drought (D2 to D3) is possible by January if dry fronts with very low humidity and warm temperatures are more common.
Falcon Reservoir Beginning to Drop; Amistad to Level Off in November, then Drop

- Late October 2022 total capacity, Falcon Reservoir: **18.4 percent** (down from **18.9 percent** at end of September) on Oct. 21st. Still very low relative to long term averages.
- Late October 2011 total capacity, Falcon Reservoir: **44 percent**
Wildfire Spread Potential Could Worsen in through January

- New growth fuels remain abundant across the “upper” Rio Grande Valley, Rio Grande Plains, and Brush Country as of late October.
- Additional rains and warm/humid conditions maintained grass and brush growth in these areas into October; drier weather began increasing fuel “litter” (slowly) from Brooks/Hidalgo County eastward to IH-69E, in general. **Forecast Dry and warm conditions November and December** will begin to dry out more areas.
- Those fuels are likely to become rapidly parched, especially if “dry” fronts surge strong northwest winds and very low humidity across high growth areas, bringing **“flash drying” and perhaps a flash drought** event in November-December.
- Such a situation (right) could lead to large growth late autumn/winter wildfires, similar to late 2010 and early 2011. Favored locations would generally be along and west of IH-69E/US 77.
November 2022: Confidence High on Dryness, Medium-High on Heat

Bottom Line: Through early November, warm and generally dry weather is expected, with occasional fronts providing scattered mainly light rain.

Later in November, the “flat” ridge may be replaced by warm/humid southwest flow aloft that brings rain into parts of the southern Great Plains while leaving the southern tip of Texas largely rain-free. A couple of notable cold fronts may also dent the general warm conditions.
Winter through mid Spring 2023: Continued Warm and Dry…
…but significant cold snaps could crash through in Jan-Feb.
Bottom Lines

• While Amistad Reservoir levels will slowly rise into early November, levels at Falcon will continue to fall slowly. For early November through December, Amistad will level off and could also begin falling. The combined share of water is likely to remain low to very low headed into the early spring growing season. Water conservation, smart irrigation, and rainwater harvesting are still viable actions.

• The growth, thickness, and density of grasses and brush in mid September could quickly become “tinder/duff” for rapid-spread wildfires by late November and December, based on the forecast. Wildfire prevention activities should resume this autumn and resources should be readied for deployment, just in case. Conditions may continue into January.

• Between late November and New Year’s Eve, the potential for one or two strong cold fronts – dropping “feels like” temperatures between 40 and 50 degrees – is possible. Residents should consider their winter wardrobes and ensure heating systems are in proper working order.

• Several freezes are possible as early as late December, but more likely in January – similar to 2021. A hard freeze is also a possibility. Utility companies, crop and livestock farmers, and transportation departments should revisit and ready their winter preparedness plans in November through early December to be ready.