



# February to April (Late Winter to Spring) 2025 Outlook: Perspective for the Lower Rio Grande Valley/Deep S. Texas Region



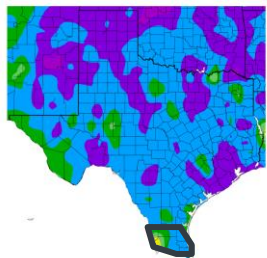
**NATIONAL  
WEATHER  
SERVICE**

January 27, 2025

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NWS Brownsville/Rio Grande Valley, Texas

Some cool/cold air risks remains through February, but nothing extreme as forecast for warmer and drier than normal conditions remain intact; wildfire potential, water supply, and hazardous marine conditions remain in focus

Departure from Normal Temperature (F)  
1/1/2025 - 1/22/2025



From  
This...



To This?



# January 2025: Arctic Express yielded some of the coldest temps on record for Jan 20-22, and helped to tilt the month colder than normal

## Minimum 3-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	35.7	1940-01-22	0
2	36.0	1883-01-22	0
3	38.7	1885-01-22	0
4	39.7	1978-01-22	0
5	40.8	1984-01-22	0
6	41.5	1930-01-22	0
7	41.8	1985-01-22	0
8	44.2	2025-01-22	0
-	44.2	1922-01-22	0
10	44.3	1918-01-22	0

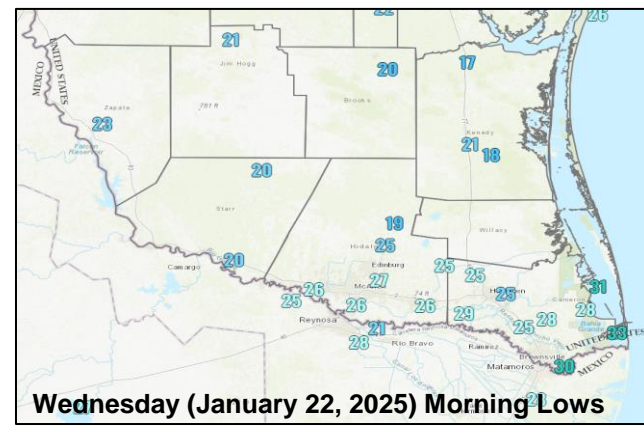
Period of record: 1878-01-01 to 2025-01-22

## Minimum 3-Day Mean Avg Temperature for McAllen Area, TX (ThreadEx)

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

Rank	Value	Ending Date	Missing Days
1	37.8	1978-01-22	0
2	39.2	2025-01-22	0
3	40.0	1985-01-22	0
4	40.2	1984-01-22	0
5	43.8	1966-01-22	0
6	46.3	2022-01-22	0
7	47.3	1987-01-22	0
8	48.7	1960-01-22	0
9	49.0	1963-01-22	0
10	50.3	2024-01-22	0

Period of record: 1941-06-01 to 2025-01-22



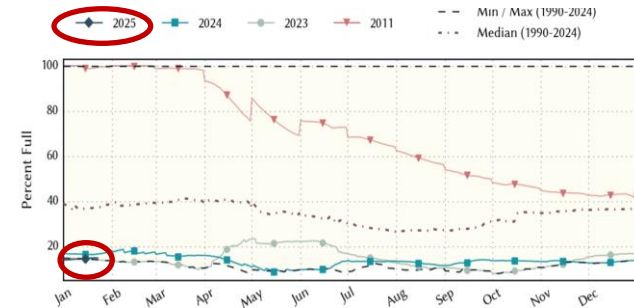
Wednesday (January 22, 2025) Morning Lows

Top Image: Observed morning lows Wednesday morning.

As of January 24 (2025), Brownsville's average temperature of 57.6F degrees is **-4.9F** degrees cooler than normal. Harlingen's average temperature of 54.2F degrees is **-6.2F** degrees cooler than normal. Finally, McAllen's average temperature of 56.3F degrees is **-6.1F** degrees cooler than normal.

The three day cold snap from January 20-22, 2025 was the **2nd coldest on record** for McAllen and the **8th coldest on record** for Brownsville. Morning lows on January 21 and 22 in McAllen ranked as the **2nd** and **1st coldest lows** on these dates on record, respectively. Additionally, morning lows on January 21 and 22 in Brownsville ranked as the **4th** and **3rd coldest lows** on these dates on record, respectively.

Rainfall production were near normal levels for January. As of late January, combined shares at the Falcon Reservoir was seen higher from the previous month at 14.9%, **up 1.5%** from December's 13.4%, levels. As of January 22, shares still remained at/near record lows on par with 2022 and above 2023 levels.

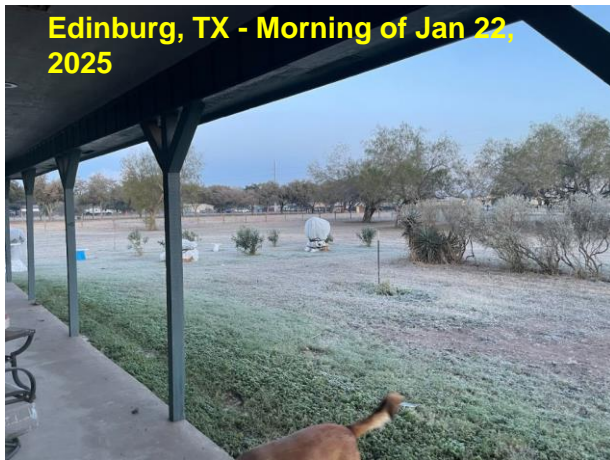


Latest data from the Rio Grande Reservoirs (Texas Share) continue to indicate 2025 levels are at or below 30 year lows and near records. Total values have increased as of late.

Image: Texas Water Development Board



# January 2025: January 20-22 Arctic Express in Photos





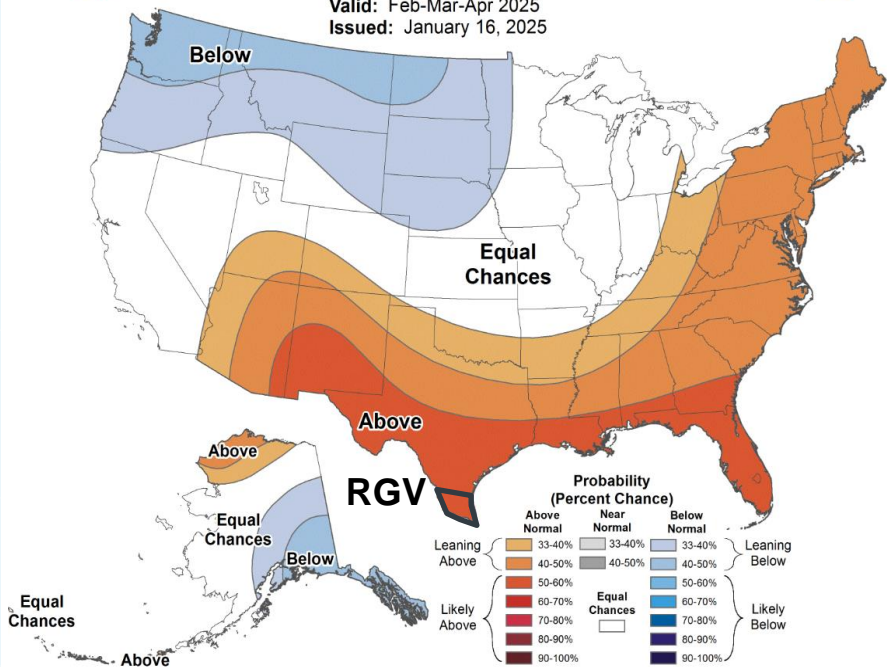
# Seasonal Forecast, February – April 2025 USA



## Seasonal Temperature Outlook



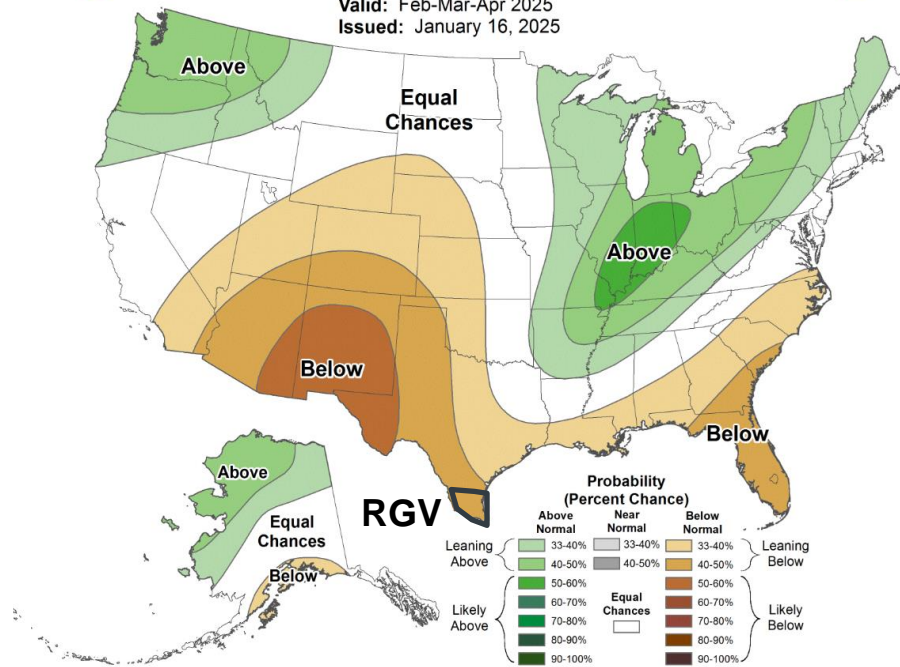
Valid: Feb-Mar-Apr 2025  
 Issued: January 16, 2025



## Seasonal Precipitation Outlook



Valid: Feb-Mar-Apr 2025  
 Issued: January 16, 2025



# Key Takeaways: February-April (Late Winter-Spring 2025) Outlook

- A **warmer** and **drier** than normal outlook is expected during the **February-April 2025** timeframe for Deep South Texas and the Rio Grande Valley. **Heat Risk** concerns are expected to increase through April.
- **Drought/dryness** concerns are expected to continue into the Spring Season.
- Falcon and Amistad remained **near historic lows at the end of January**. **Confidence is near-certain (~100%) on total storage remaining at or near record lows through April**.
- Confidence remains **medium-high (60-80%)** that **temperatures will run normal to warmer than normal** from February through April. Confidence is **medium (50-60%)** on a **drier than normal outcome** for the period. Confidence is **medium (50-60%)** that **drought/dryness** will continue to expand over Deep South Texas and the Rio Grande Valley through April.
- Following the January 20-22 Arctic Blast, **wildfire growth concerns are expected to peak in February and March** as grasses across the region have become freeze cured.
- Despite a drier than normal outlook, **showers and thunderstorms that could produce heavy rainfall and localized flooding** has to be taken into consideration, especially in March and April.
- Occasional **cool fronts** are expected to continue through the remainder of the Winter Season, however not at the magnitude of the January 20-22 Arctic Blast and become weaker as we head into March and April. Another surge of Arctic Air is not expected through the remainder of the winter season as **confidence is low (10% or less)**.
- Difficult to dangerous boating and beach conditions will continue on occasions through March 2025!



# The “Why” of the Forecast: La Nina, soil moisture, long-term trends, intraseasonal variability, and other key climate teleconnections to play a factor

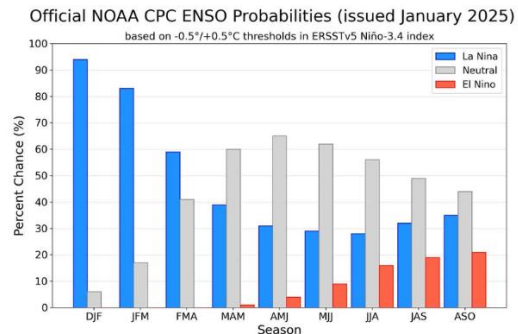
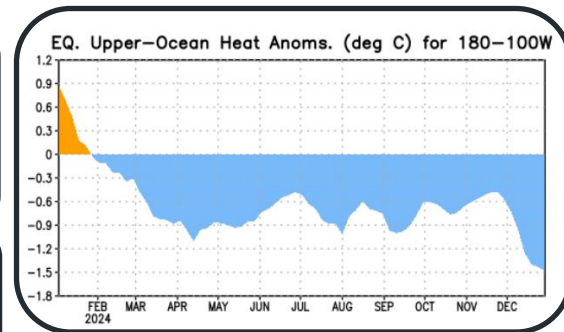
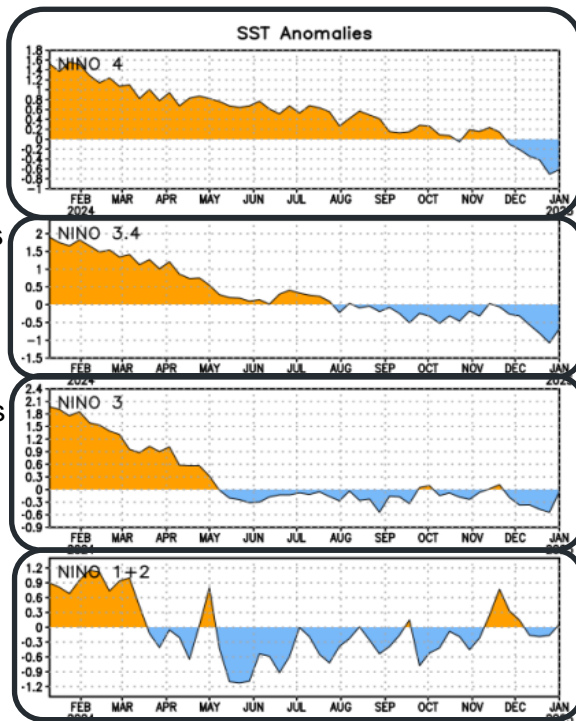
Year	DJF	JFM	FMA	MAM	AMJ	MJJ	JJA	JAS	ASO	SON	OND	NDJ
2021	-1.0	-0.9	-0.8	-0.7	-0.5	-0.4	-0.4	-0.5	-0.7	-0.8	-1.0	-1.0
2022	-1.0	-0.9	-1.0	-1.1	-1.0	-0.9	-0.8	-0.9	-1.0	-1.0	-0.9	-0.8
2023	-0.7	-0.4	-0.1	0.2	0.5	0.8	1.1	1.3	1.6	1.8	1.9	2.0
2024	1.8	1.5	1.1	0.7	0.4	0.2	0.0	-0.1	-0.2	-0.2	-0.4	

- With a La Nina in place, **warmer than normal temperatures** are favored to continue through April and potentially longer. Additionally, this setup favors an **overall drier than normal pattern** into the Spring Season.

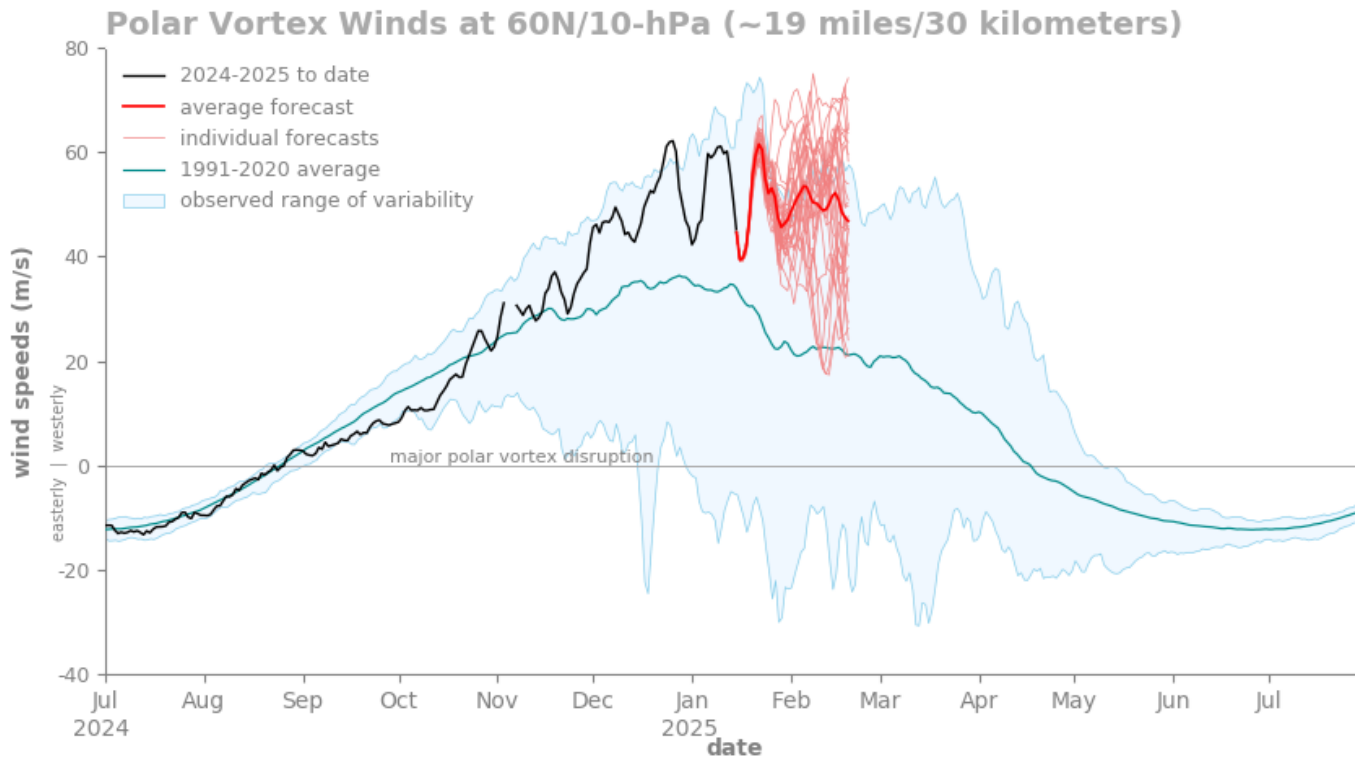
- In addition to a La Nina, the **placement of the jet stream** and other important **teleconnections** (i.e. **AO/Arctic Oscillation, PNA/Pacific North American Oscillation**), **polar vortex (PV) strength** could play a vital role in *intraseasonal variability* leading to an anomalous weather event such as increased **heat risk** and instances of **heavy rainfall/flooding** this Spring Season!

- Wildfire season** remains on the table through March as **drought/dryness** trends continue to **increase!**

\*Above right: Oceanic Niño Index. Values below -0.5 (light blue) for five consecutive 3-month periods indicated La Niña. El Niño (red, +0.5) officially began in April-June 2023, reached strong levels (+1.5) by August-October 2023, strengthened further through November-January, then weakened rapidly through early summer. Neutral conditions arrived for April-June 2024.



# Polar Vortex is expected to remain strong into March

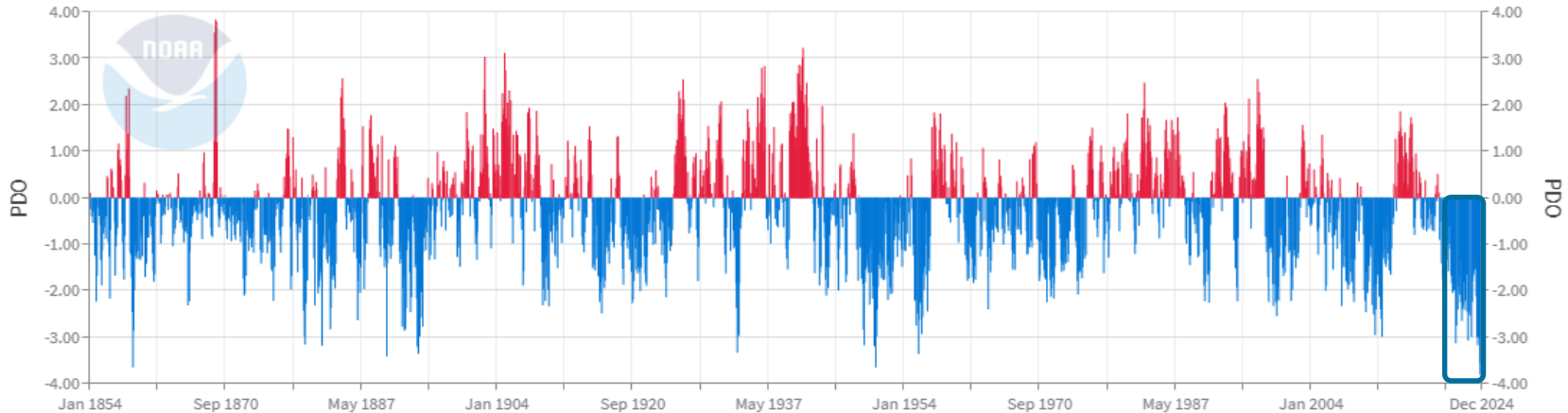


- Risk for a significant cold snap (but not a hard freeze) through March is **low (20-30%)** as the polar vortex remains strong.

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

## Pacific Decadal Oscillation (PDO)

January 1854-December 2024



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

- The 2021-2025 **prolonged and strong negative PDO has persisted**, and should remain the case headed into the expected La Niña period. This **increases confidence** for a **drier and warmer than normal pattern persisting into the Spring Season.**
- The sharply negative PDO combined with a La Niña adds confidence to an increasingly dry (and still warm) forecast as we move through the beginning parts of 2025. **Confidence is high** for sharply negative PDO to maintain through the first half of 2025.





# The February-April 2025 Outlook: Rio Grande Valley (McAllen as Anchor Point)

McAllen, TX, USA

7 Day Forecast for McAllen, Texas

**Three Category Temperature Outlook**

Normal Maximum Temperature: **83**  
Normal Minimum Temperature: **63**

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

**Three Category Precipitation Outlook**

Normal Precipitation: **3.34**

● Above Normal: 25%  
● Below Normal: 42%  
● Near Normal: 33%

Select Lead

**Seasonal Outlook**  
February 2025-April 2025 (Lead 1)

Temperature      Opacity: 60%      Precipitation

● Outlook      ● Outlook

<< Below Normal      Above Normal >>

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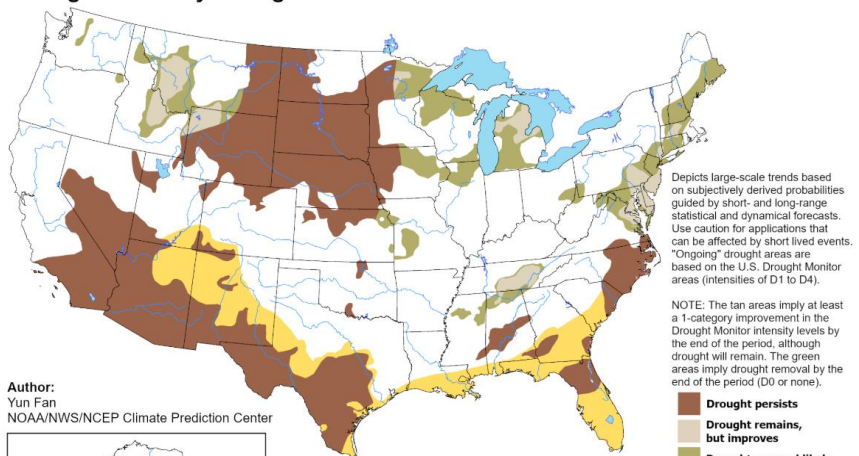
- **Temperature:** **Warmer than normal temperatures** likely to persist Feb-Apr (Confidence: Medium-High). RGV averages: Afternoon – Mid-upper 70s through early February; Upper 70s to low-mid 80s mid-February through March; Wake-up: Mid 50s through early-February; Upper 50s to mid 60s mid-February through March.
- **Precipitation:** **Drier than normal conditions** are expected to continue Feb-Apr (Confidence: Medium). RGV averages: 3.5-4 inches (most in March and April).



# The February-April 2025 “Droughtlook”

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

Valid for January 16 - April 30, 2025  
Released January 16, 2025



Author:  
Yun Fan  
NOAA/NWS/NCEP Climate Prediction Center



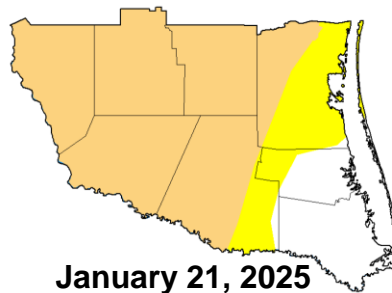
Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. “Ongoing” drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to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

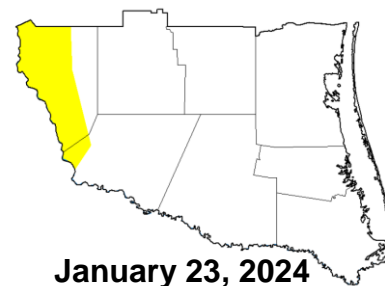
- Drought persists
- Drought remains, but improves
- Drought removal likely
- Drought development likely
- No drought



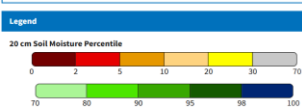
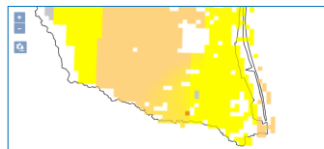
<https://go.usa.gov/3eZ73>



January 21, 2025



January 23, 2024



This map shows the moisture content of the top 20 cm of soil compared to historical conditions, based on in situ (in the ground) measurements of soil moisture from a wide range of state and federal mesonets across the continental U.S. These data are then interpolated into a 4 km grid.

Red and orange hues indicate drier soils, while greens and blues indicate greater soil moisture.

Source(s): [NationalSoilMoisture.com](https://nationalsoilmoisture.com)

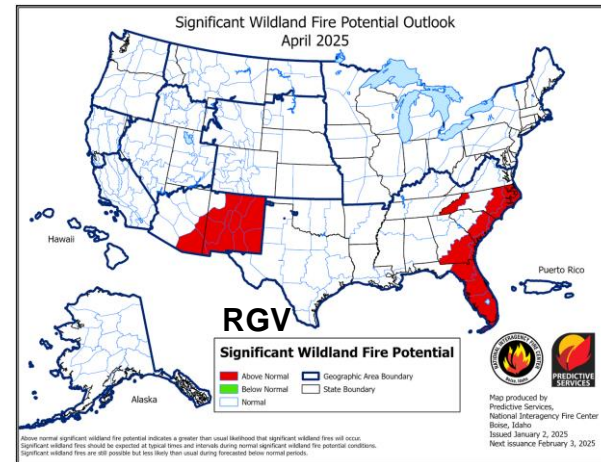
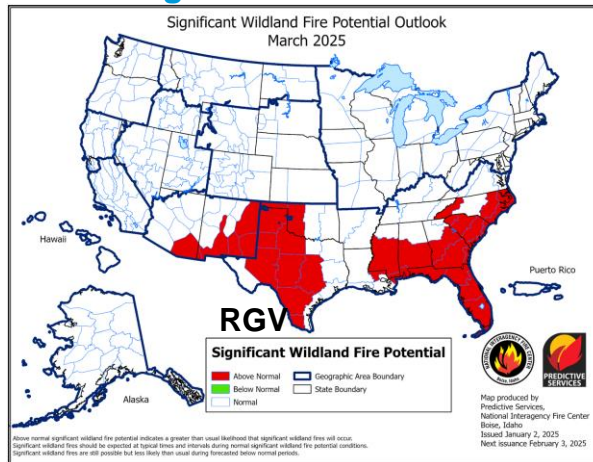
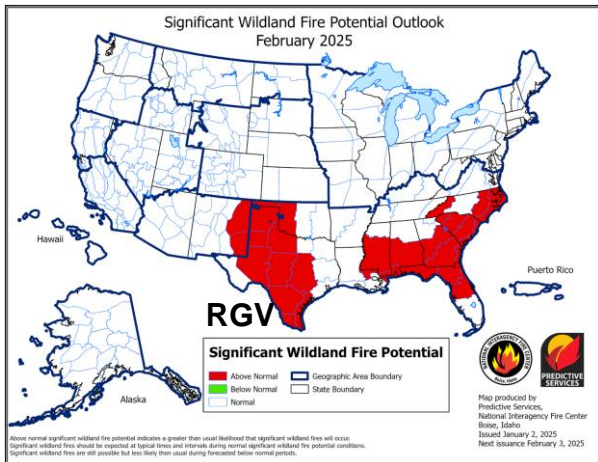
## Drought Classification

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

- **Year-over-Year (YoY) drought/dryness** over Deep South Texas and the Rio Grande Valley is greater this year compared to last year. Precipitation production has been few and far between for the mid/upper valley, where mainly D1 (moderate) drought is in place.
- Factoring in a La Nina and climatological trends, the latest seasonal outlook continues to favor the **expansion of dryness/drought** across the lower/mid Valley into this upcoming Spring Season.



# Wildfire Concerns Will Remain Elevated Through March



- Following the **Jan 20-22 Arctic Blast**, grasses across all of Deep South Texas and the Rio Grande Valley have become **freeze-cured** (see lower right image).
- In the coming weeks, moisture levels will continue to be largely dependent on rain chances, the strength and number of cold frontal passages vs. days with a return flow out of the south boosting relative humidity (RH) values. Trends favor more dry situations than moist situations headed into February.
- Dry moisture levels** are taking place across our western sections (i.e. along and west of (IH-69C). Dry moisture level trends **could continue to spread east** depending on the conditions stated above.
- Bottom lines:**
  - Given the situation, **wildfire concerns** will remain in focus, possibly peaking in February and into March. The strength of the cool/cold fronts in addition to drying trends will be key!
  - The **National Interagency Fire Center (NIFC)** has much if not all of the RGV/Deep South Texas outlooked under an “**Above Normal Potential**” in its **Wildland Fire Potential Outlook for February and March**.
  - April remains uncertain, but could lean dry based on consensus of longer-lead monthly outlooks from trusted climate models.



Freeze-Cured Grass Map for Texas (January 22, 2025)





# Wildfire Prevention Review

- This remains critical through the late winter and especially into March, especially if severe to extreme drought continues over fuel-loaded/fuel-cured rangeland north of the populated Valley. February and March 2022, and March 2023, were both active - especially across the ranchlands north of the RGV. 2025 looks similar.
- Continue to focus on **farm, ranch workers, and other persons who might drive hot vehicles** on parched brush on critical/near-critical days – especially low humidity, breezy days following fronts.



# Infographics for Wildfire Prevention

## Fire Weather SAFETY TIPS

- Be careful to not drag trailer chains that could cause sparks.
- Do not park on dry grass.
- Avoid outdoor burning and check recently burned piles for flare-ups.
- Clear out dead vegetation from around your home.
- Be careful when welding in dry grass.

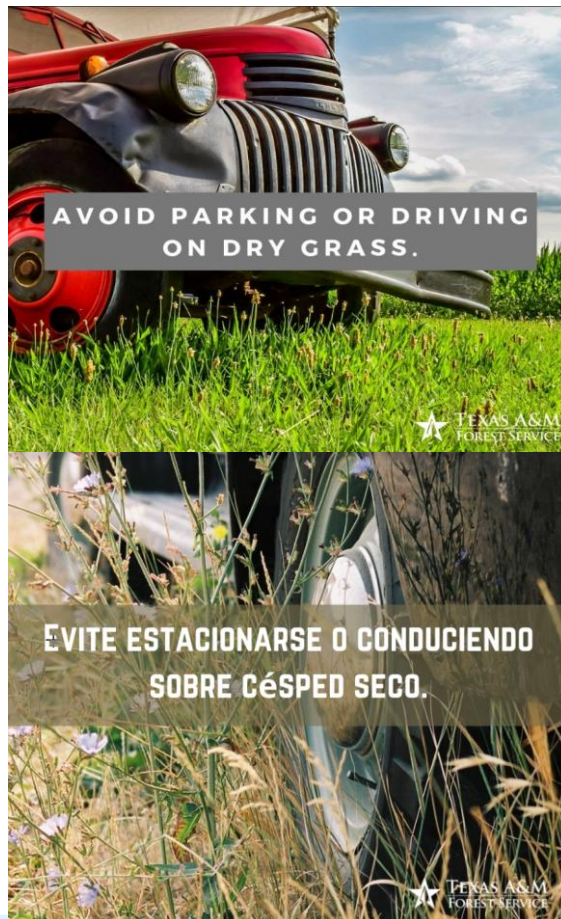


## Consejos de Seguridad Contra Incendios

- Tenga cuidado de no arrastrar cadenas de remolque que podrían provocar chispas.
- No se estacione sobre césped seco.
- Evite las quemaduras al aire libre y revise las pilas recientemente quemadas para detectar brotes de fuego.
- Elimine la vegetación muerta alrededor de tu casa.
- Tenga cuidado soldar en hierba seca.

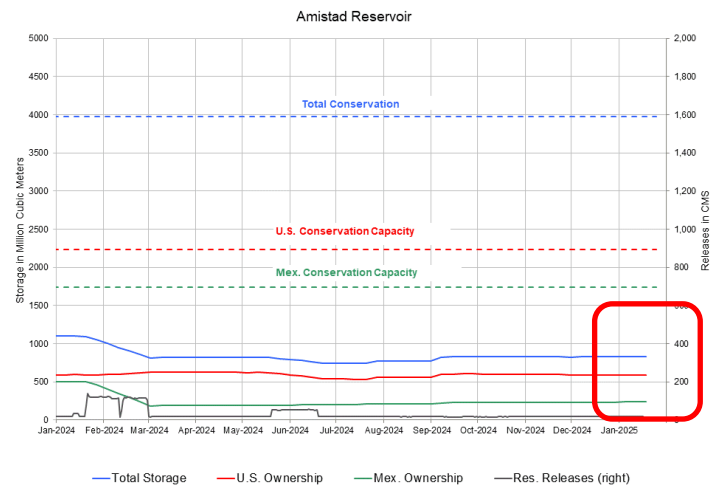
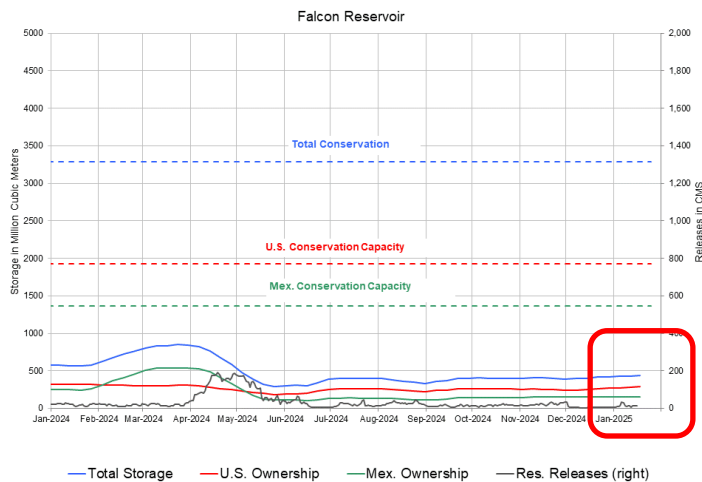


- ~50 in all (20 in Spanish)!
- Thanks to **Texas A&M Forest Service** for Many of These!





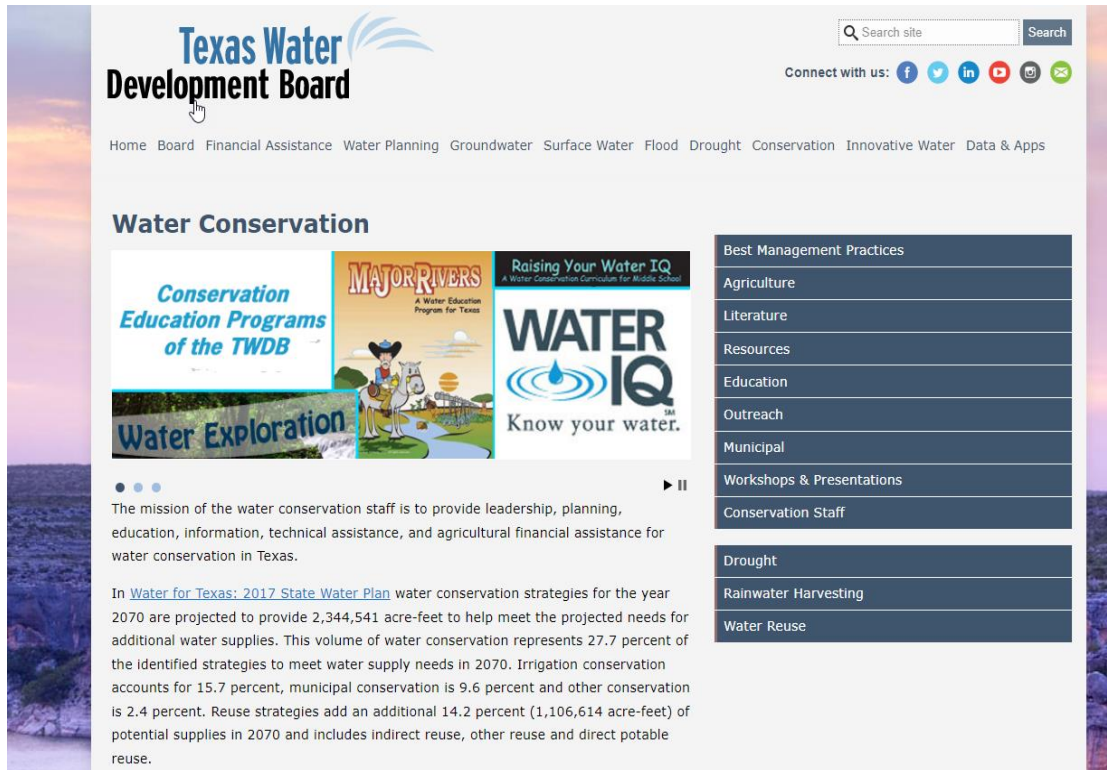
# Amistad and Falcon Reservoirs remains at or near Record Lows heading into the New Year



- **Falcon remained nearly steady, ending late January at 13.3 percent (up slightly from 12.7% in late December).** This level is just a few ticks above prior records. Levels may not change much through April.
- **Amistad remained steady and above all-time record lows in late January.** Levels were at 20.8% on January 23<sup>rd</sup> (same level of 20.8% from December 19). Levels may not change much through April.



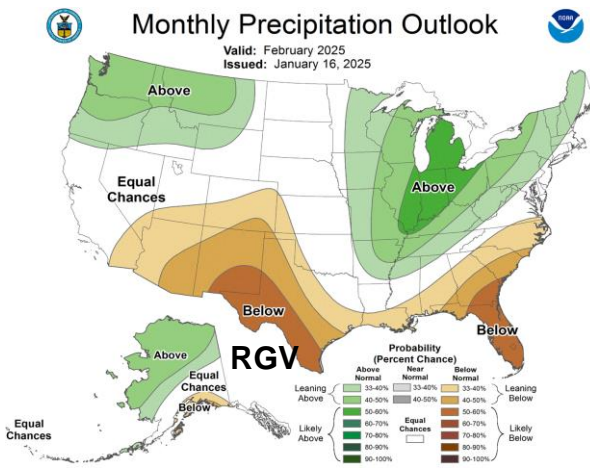
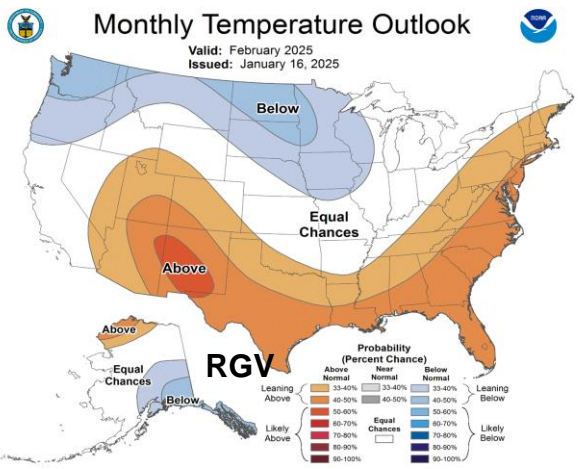
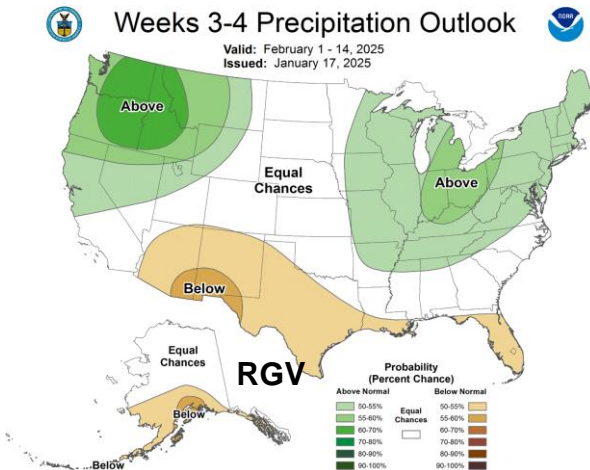
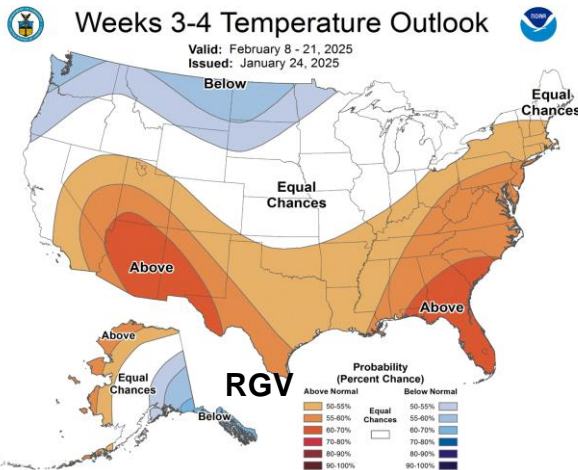
# Water Conservation is Key Until Further Notice!



The screenshot shows the Texas Water Development Board website. At the top left is the logo with the text "Texas Water Development Board". To the right is a search bar and social media icons for Facebook, Twitter, LinkedIn, YouTube, Instagram, and RSS. Below the logo is a navigation menu with links: Home, Board, Financial Assistance, Water Planning, Groundwater, Surface Water, Flood, Drought, Conservation, Innovative Water, and Data & Apps. The main content area is titled "Water Conservation" and features a carousel of educational materials: "Conservation Education Programs of the TWDB", "Water Exploration", "MAJOR RIVERS A Water Education Program for Texas", and "Raising Your Water IQ A Water Conservation Curriculum for Middle School". To the right of the carousel is a vertical menu with categories: Best Management Practices, Agriculture, Literature, Resources, Education, Outreach, Municipal, Workshops & Presentations, and Conservation Staff. Below this menu is a "Drought" section with sub-items: Rainwater Harvesting and Water Reuse. Below the carousel, there is a paragraph of text: "The mission of the water conservation staff is to provide leadership, planning, education, information, technical assistance, and agricultural financial assistance for water conservation in Texas." This is followed by a paragraph starting with "In [Water for Texas: 2017 State Water Plan](#) water conservation strategies for the year 2070 are projected to provide 2,344,541 acre-feet to help meet the projected needs for additional water supplies. This volume of water conservation represents 27.7 percent of the identified strategies to meet water supply needs in 2070. Irrigation conservation accounts for 15.7 percent, municipal conservation is 9.6 percent and other conservation is 2.4 percent. Reuse strategies add an additional 14.2 percent (1,106,614 acre-feet) of potential supplies in 2070 and includes indirect reuse, other reuse and direct potable reuse."

- “Stage 2/3” Restrictions continued through early winter 2025 and are likely to continue **until further notice** based on inflows from Amistad and Falcon.
- Learn more at the [Texas Water Development Board’s Conservation Page](#)

# February 2025: Confidence: Medium-High (60-80%) on Temperature and Precipitation Trends

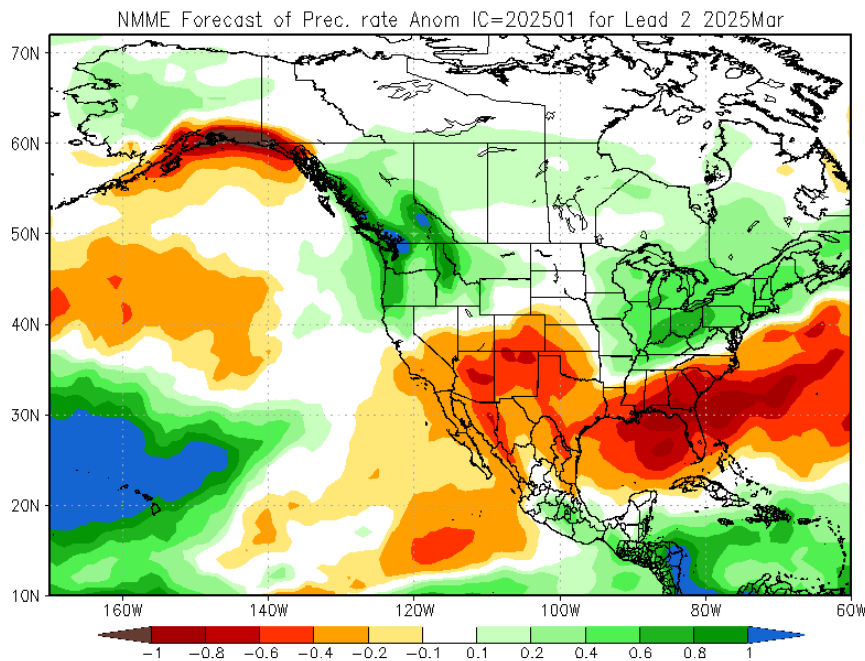


- Medium to long-range models are suggesting a **cool/cold snap** taking place around the **1st week of February (i.e. Feb 7-9 timeframe)**. However, this cold snap is **not expected to be of the magnitude of the Jan 20-22 Arctic Blast event**.
- Despite the **potential for a cool snap or two**, February should average out **warmer than normal** as **building atmospheric high pressure** will be more of the dominant driver in the weather pattern. The **onset of heat risk** will be on the **increase** as we move into March/April.
- A **drier than normal pattern** is expected for the month of February, though **moisture influx** and the **chance for non-tropical showers and storms** will **gradually be on the increase** as we begin to shift towards the Spring Season.
- Though we are expecting a drier than normal pattern, **heavy rainfall or flooding events can still develop**. Have to **monitor the potential for showers and storms** that could **produce heavy rainfall/flooding risk!**



# Early Look: March 2025

## Potential rainfall rate anomaly, March 2025

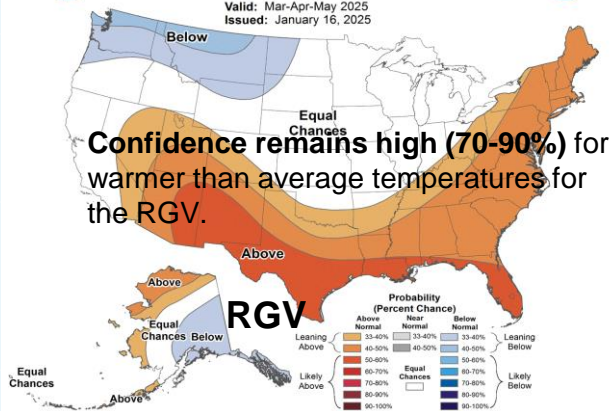


- This model's forecast for March suggest a **dry pattern** (note the red color over the area and nearby brown colors) continuing. Confidence is medium.
- As we shift towards the Spring Season, **showers and thunderstorms are possible**. **The position of the southern jet stream (subtropical jet) will be key!** Though we do expect to see showers and thunderstorms, at this time, we are leaning towards an **overall drier than normal pattern** in March.

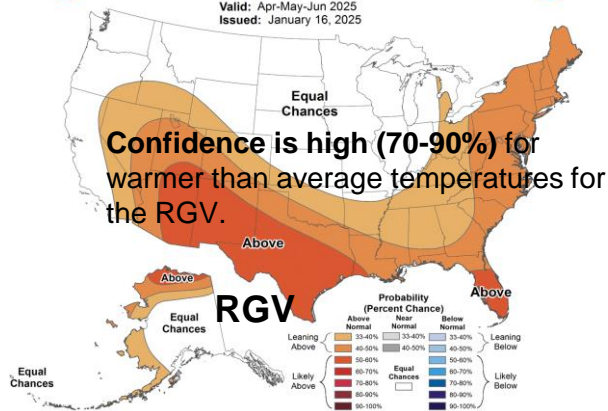


# Spring into early Summer 2025: Warmer than Normal Trends are Favored; Precipitation pattern is a toss-up

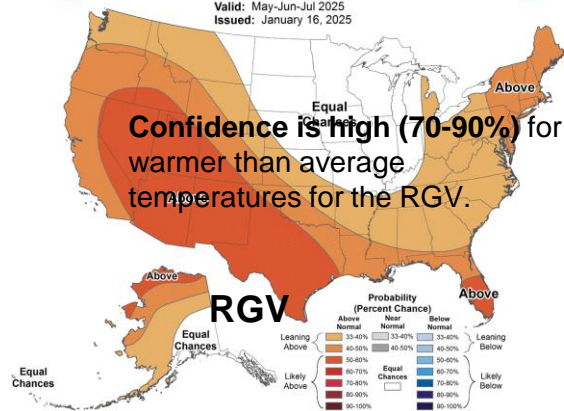
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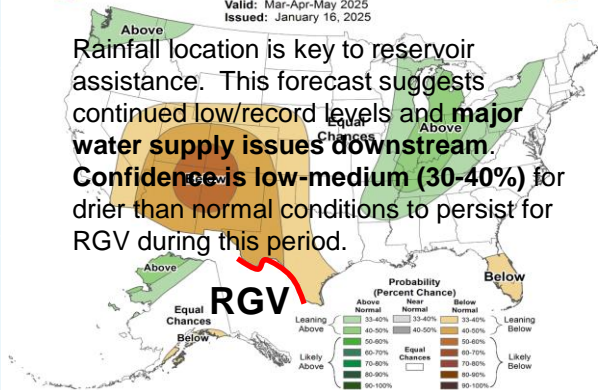
**Seasonal Temperature Outlook**  
Valid: Apr-May-Jun 2025  
Issued: January 16, 2025



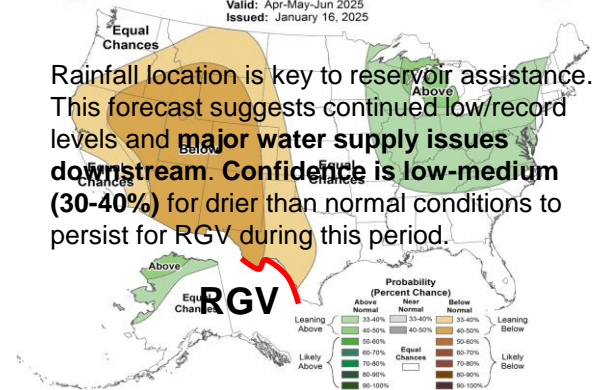
**Seasonal Temperature Outlook**  
Valid: May-Jun-Jul 2025  
Issued: January 16, 2025



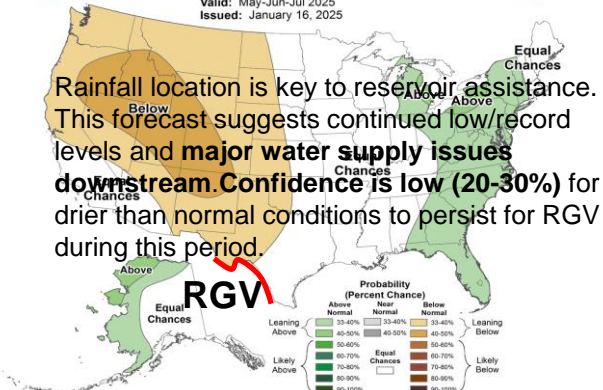
**Seasonal Precipitation Outlook**  
Valid: Mar-Apr-May 2025  
Issued: January 16, 2025



**Seasonal Precipitation Outlook**  
Valid: Apr-May-Jun 2025  
Issued: January 16, 2025

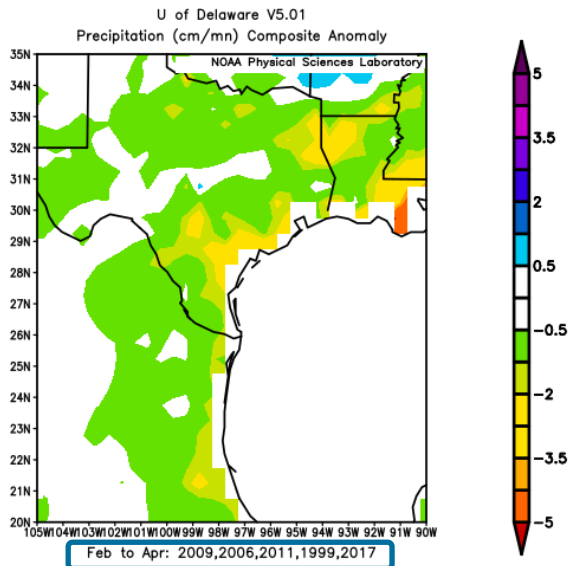


**Seasonal Precipitation Outlook**  
Valid: May-Jun-Jul 2025  
Issued: January 16, 2025



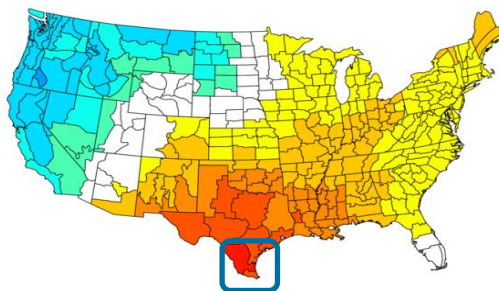


# Comparing Similar El Niño to La Niña Episodes within the last 30 years; Feb-Apr Periods

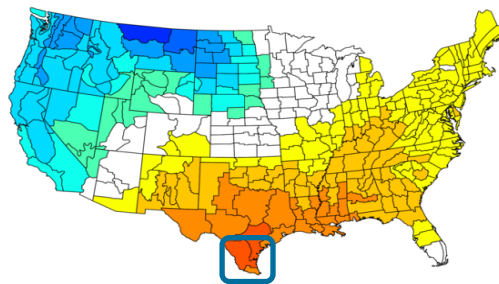


Composite departure from average rainfall for years of similar El Niño to La Niña transition episodes in the February-April window.

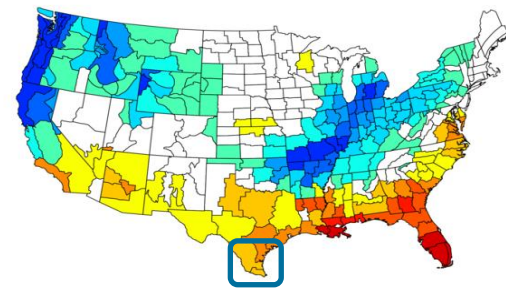
NOAA/NCEI Climate Division Composite Temperature Anomalies (F)  
Feb to Apr 2009,2018,2011,2017,1999,2006  
Versus 1991–2020 Longterm Average



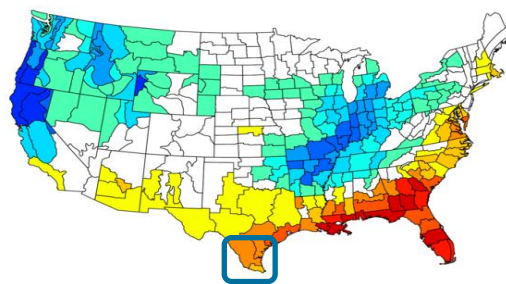
NOAA/NCEI Climate Division Composite Temperature Anomalies (F)  
Feb to Apr 2009,2018,2011,2017,1999,2006,2019  
Versus 1991–2020 Longterm Average



NOAA/NCEI Climate Division Composite Precipitation Anomalies (in)  
Feb to Apr 2009,2018,2011,2017,1999  
Versus 1991–2020 Longterm Average



NOAA/NCEI Climate Division Composite Precipitation Anomalies (in)  
Feb to Apr 2009,2018,2011,2017,1999,2006,2019  
Versus 1991–2020 Longterm Average



- **Top:** Composite temperature (left) and precipitation (right) anomalies for similar El Niño to La Niña transition episodes leading into February-April, since 1950.
- **Bottom Left:** Same, except added 2019 season. **Bottom Right:** Same, except added 2006 and 2019 seasons.



# Bottom Lines

**Warmer than normal conditions** and **drier than normal conditions** are expected to persist into the Spring Season with a La Nina in place. As we move into the Spring Season, particularly March and April, **heat risk concerns** are expected to increase. **Dryness** is expected remain in focus over Deep South Texas February-April.

Sufficient inflows from Mexican and International reservoirs serving the Lower Rio Grande watershed remain unlikely. The **combined share of water in Amistad and Falcon will likely to continue well below Stage 2 and 3 triggers (25% or less) until further notice**. Water conservation, smart irrigation, and rainwater harvesting are **critical actions to continue as we move into the dry season**.

**Fire weather** is expected to remain in focus February-April, as **soils continue to dry** and **cool/cold fronts** continue. Farmers/ranchers should be ready to **implement fire safety rules!**

**Note:** Just b/c a drier than normal pattern is expected February-April, it doesn't mean that heavy rainfall/flooding is not to occur. Should the pattern setup, there could be **instances of showers and thunderstorms that result in heavy rainfall/flooding** as we move into the Spring Season.

