



**NATIONAL
WEATHER
SERVICE**

November 2024 to January 2025 Outlook: Perspective for the Lower Rio Grande Valley/Deep S. Texas Region

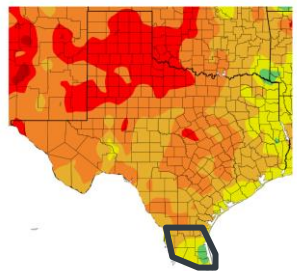
October 27, 2024

Arei Evbuoma and Barry Goldsmith

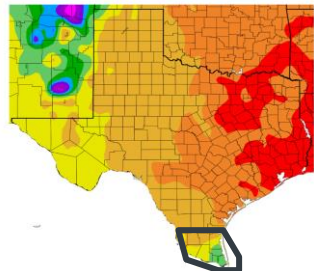
NWS Brownsville/Rio Grande Valley, Texas

Forecast for dry trends and warmer than normal temperatures remain intact
November-January; wildfire potential, water supply, and cold fronts are in the mix

Departure from Normal Temperature (F)
10/1/2024 – 10/21/2024



Departure from Normal Precipitation (in)
10/1/2024 – 10/21/2024



Late October 2024



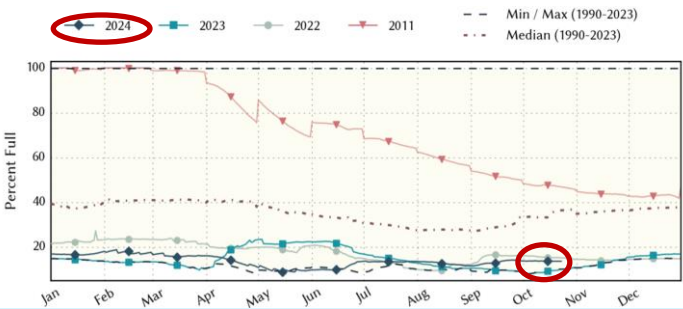
Late Dec 2024/Jan 2025?



October 2024: Cameron- Kenedy Get More Rainfall; Brush Country Misses Out

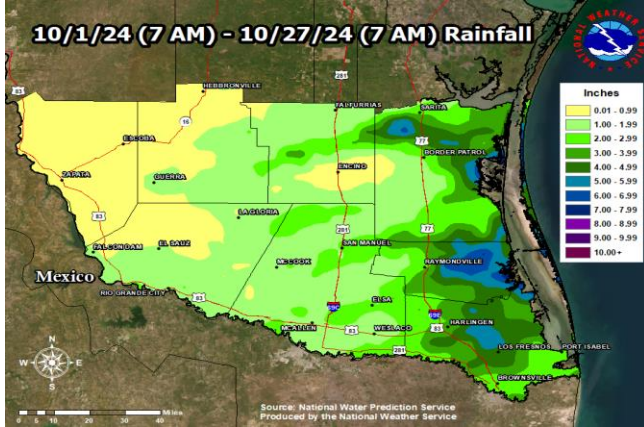
Country Misses Out

- October will be remembered as a month with scattered locally heavy rains near/along the coast, persistently warm temperatures, mainly light winds, and plenty of sunny days.
- October's monthly rainfall totals as of the 26th at official observing locations varied, based on location/duration of early month storms. Brownsville/South Padre Island Int'l Airport was at **1.99"** (**59% of average**), Harlingen/Valley Int'l Airport was **3.16"** (**136% of average**), and McAllen was at **0.49"** (**27% of average**). Year-to-date (YTD) amount at Brownsville was 36.16" or **12.98 above average**. YTD amount at McAllen was 23.01", or **3.61" above average**.
- Unfortunately, Falcon and Amistad Int'l Reservoirs remain in dire condition as rainfall was minimal across the headwaters! The Texas share at Falcon (below) slipped from late September (14 to 13.5%). Levels still remained at/near record lows on par with 2022 and above 2023 levels.

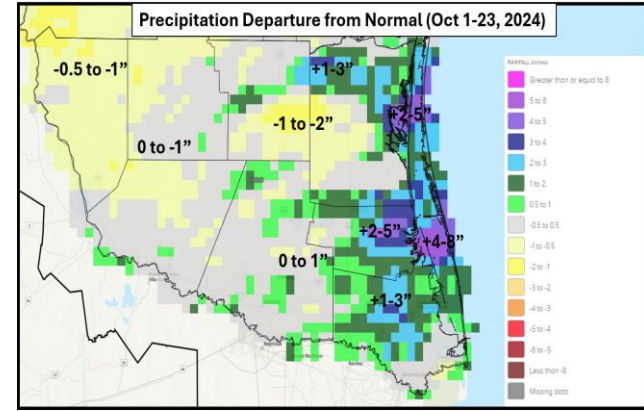


Latest data from the **Rio Grande Reservoirs (Texas Share)** continue to indicate 2024 levels are at or below 30 year lows (and near records. Levels at Falcon (left) slipped a little between late September and late October.

Image: Texas Water Development Board



Top Image: Feast and famine for the RGV/Deep S. Texas ranchlands. Feast rainfall...estimated at 5 to 8 inches...fell in pockets of eastern Kenedy, Willacy, and Cameron. Famine rainfall...generally an inch or less...fell along/west of IH69C/US 281. **Bottom Image:** Departures were above average generally along/east of IH-69E/US77, but below average elsewhere.



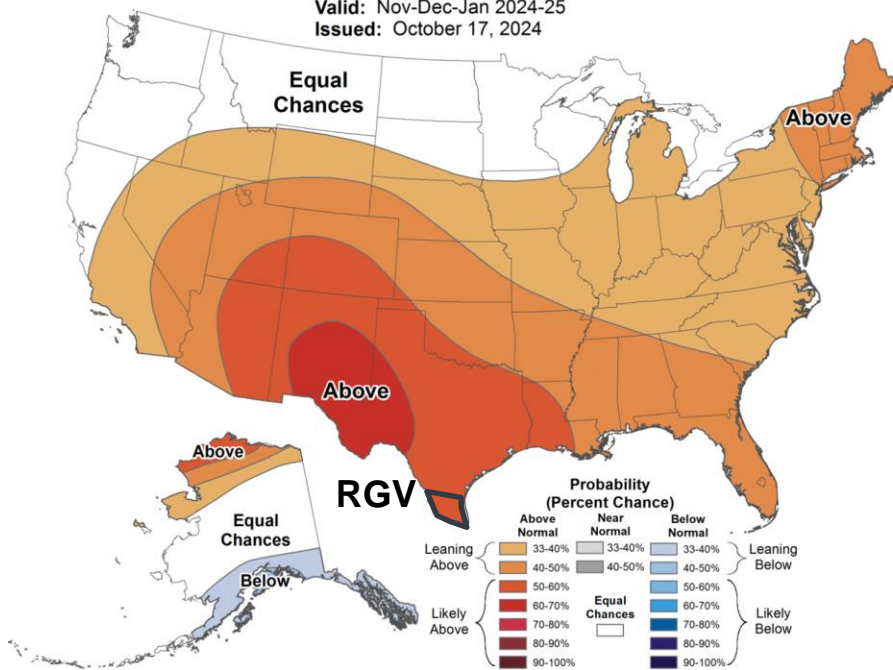
Seasonal Forecast, November 2024 – January 2025 USA



Seasonal Temperature Outlook



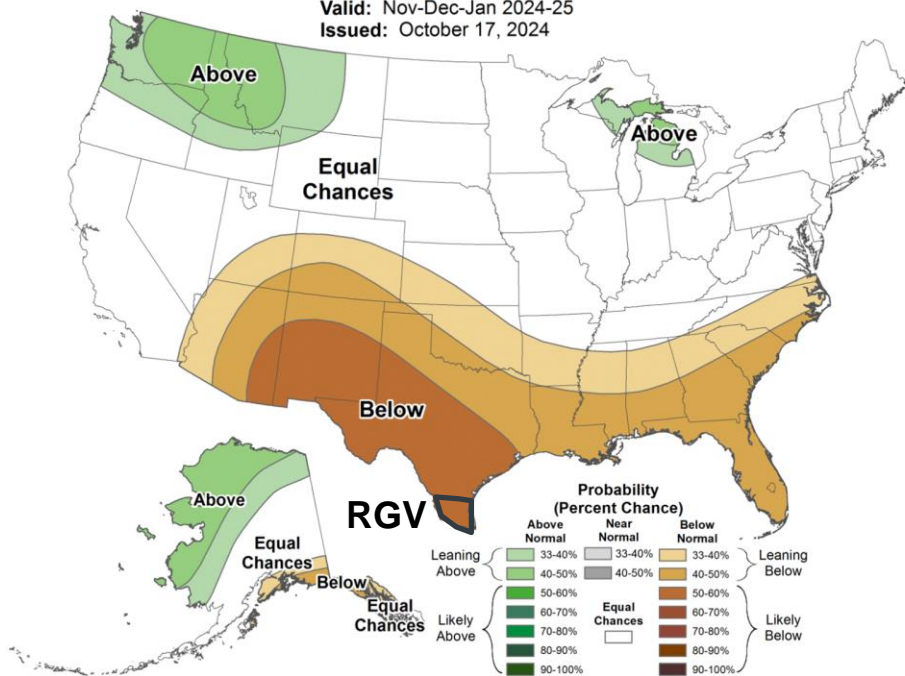
Valid: Nov-Dec-Jan 2024-25
 Issued: October 17, 2024



Seasonal Precipitation Outlook



Valid: Nov-Dec-Jan 2024-25
 Issued: October 17, 2024



Key Takeaways: November 2024-January 2025 Outlook

- **Warmer and drier than average conditions are likely** through the Fall for Deep South Texas and the Rio Grande Valley. With **tropical season** over for the region, and **cooler, drier** air intrusions increasing, **drought/dryness** concerns will *increase* as we move deeper into autumn and eventually into winter.
- Confidence is **medium-high** that **temperatures will run normal to warmer than normal** from November through January. Confidence is **medium-high** on a **drier than normal outcome** for the period. Confidence is **high** that **abnormally dry conditions** could develop over areas along/west of IH-69C/US 281 (Brooks/Hidalgo west) in November, and **medium-high** that **Moderate (level 1) to Severe (level 2) Drought** in these areas by December and January.
- Falcon and Amistad remained **near historic lows at the end of October**. **Confidence is near-certain on total storage remaining at or near record lows through January**.
- As we move deeper into November and December, **cool/cold and dry air intrusions** via cold fronts will become **more frequent and progressively stronger in time**. **Wildfire spread** and **dangerous seas, surf, and marine winds** are among the items that are expected to become more active heading towards the end of the year!
- **Note:** Despite the favored warmer than average temperatures through late autumn and into winter, chances (20 to 30 percent) **for a significant cold snap have increased!** The past two winters (2022/23 and 2023/24) had these. **Stay tuned.**



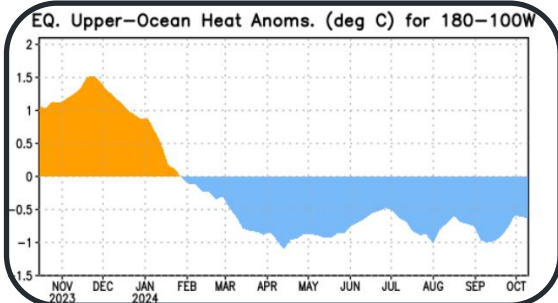
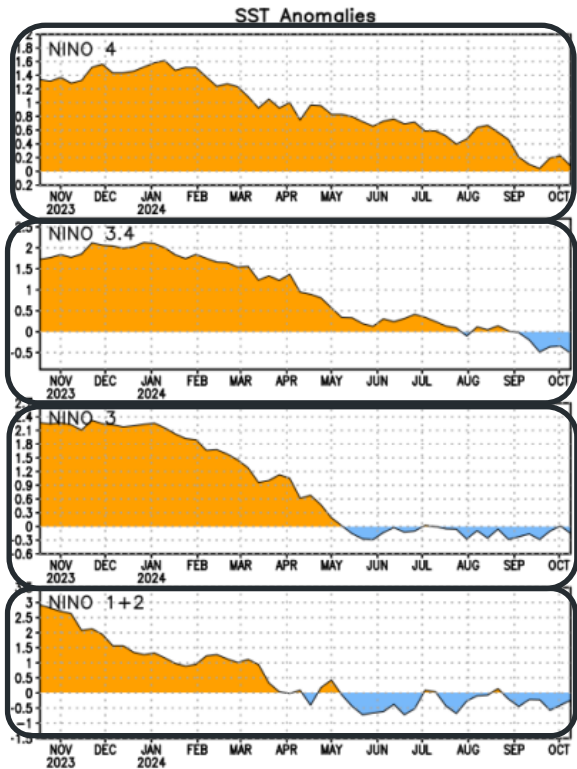
The "Why" to the Forecast: La Niña still on track to develop by late autumn; soil moisture, long-term trends, intra-seasonal variability, and other key climate teleconnections could play a factor

| 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 | | | | |

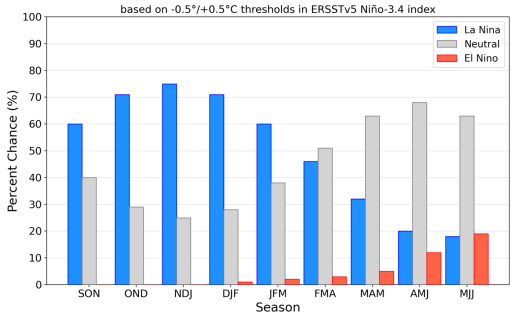
The continued and rather **rapid transition from ENSO Neutral towards a La Niña** through November (at 71% chance) favors **warmer than normal temperatures** through January and potentially longer. Additionally, this setup favors a **drier trend in the pattern emerging through autumn.**

Despite the ENSO trend of a La Niña developing this Fall, other important **teleconnections** (i.e. [Arctic Oscillation](#), [Pacific-North American Oscillation](#)), [circumpolar vortex \(PV\) strength](#), and northern hemisphere snow cover could play a **vital role in intraseasonal variability** leading to an anomalous weather event such as a **major cold snap or ice storm** this upcoming cool season!

Wildfire season could **emerge** as early as November and could potentially become **robust in December through the early parts of 2025.**



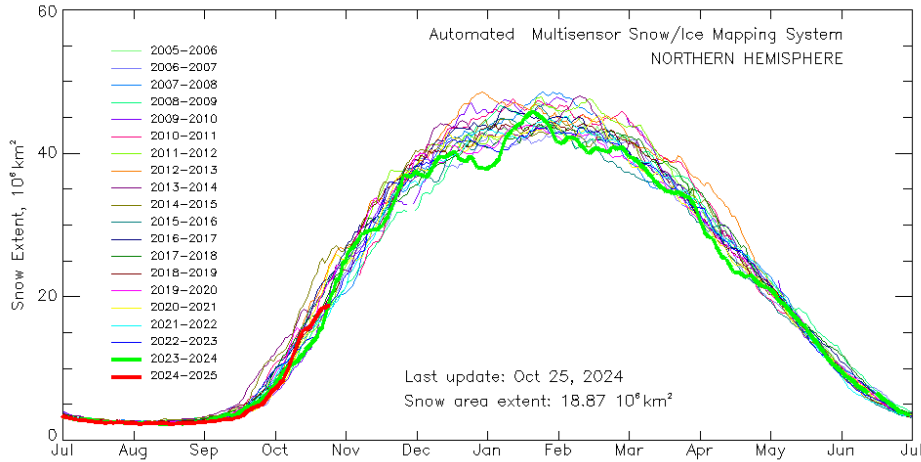
Official NOAA CPC ENSO Probabilities (issued October 2024)



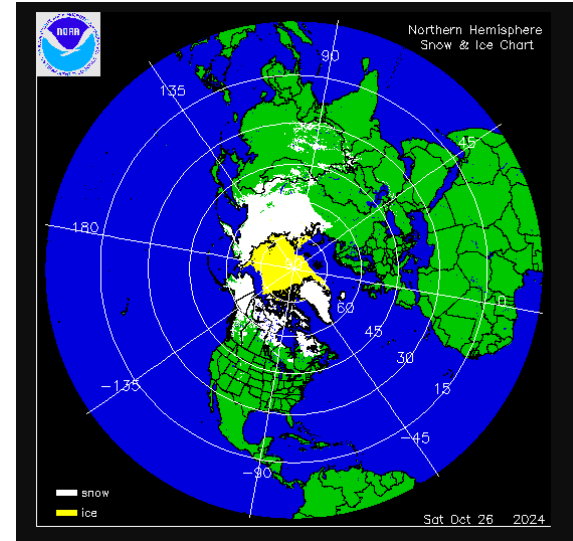
*Above right: Oceanic Niño Index. Values below -0.5 (light blue) for five consecutive 3-month periods indicated La Niña. El Niño (red, +0.5) officially began in April-June 2023, reached strong levels (+1.5) by August-October 2023, strengthened further through November-January, then weakened rapidly through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

Northern Hemispheric Snow Cover Extent Maps and Charts

Daily snow extent and anomalies



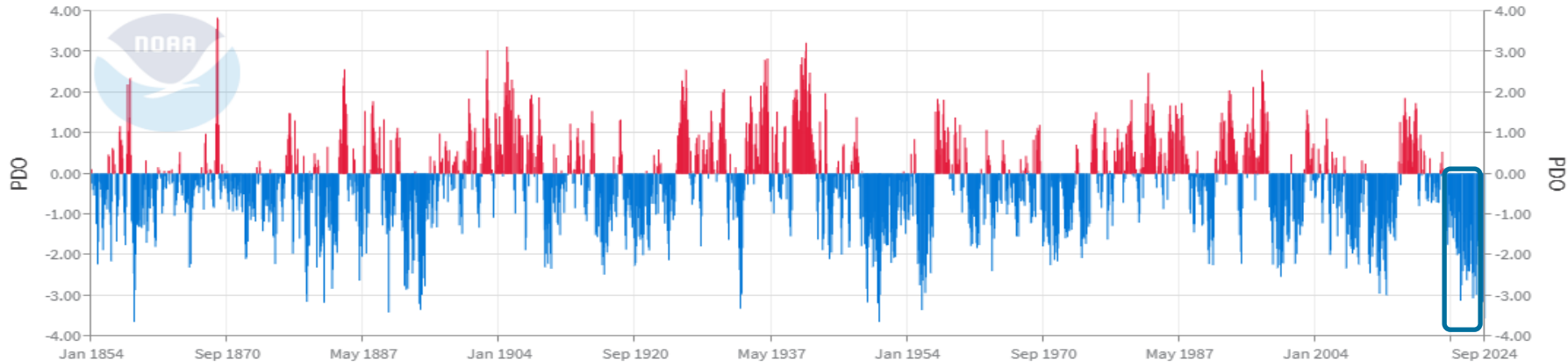
Latest snow map



- The **location and extent of snow cover in the northern hemisphere** could serve as a key indicator of how **strong** the **cold fronts** from the north become later this Fall and Winter Season!
- As of late October, there is no snow cover of note here in the United States...
- ...but this will change in November and **especially December and January**, so stay tuned.
- A period when snow cover extending southward into north Texas or the Texas Panhandle could combine with an **“Arctic Express”** front to bring a **stronger burst of cold to the Valley**.

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

Pacific Decadal Oscillation (PDO)



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

- The 2021-2024 **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 continuing in November and persisting into Winter**.
- The sharply negative PDO combined with the developing La Niña adds confidence to an increasingly dry (and still warm) forecast as we approach the end of 2024. **Confidence is high** for sharply negative PDO to maintain through the end of the year and into early 2025.



The November 2024 – January 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: **76**
 Normal Minimum Temperature: **56**

Above Normal 53%
 Below Normal 14%
 Near Normal 33%

Three Category Precipitation Outlook
 Normal Precipitation: **3.01**

Above Normal 10%
 Below Normal 57%
 Near Normal 33%

Select Lead

Seasonal Outlook
 November 2024-January 2025 (Lead 1)

Temperature Opacity: 60% Precipitation

Outlook Outlook

Below Normal Above Normal

POWERED BY esri

McAllen, TX, USA

7 Day Forecast for McAllen, Texas

Three Category Temperature Outlook
 Normal Maximum Temperature: **76**
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Above Normal 53%
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Select Lead

Seasonal Outlook
 November 2024-January 2025 (Lead 1)

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Outlook Outlook

Below Normal Above Normal

POWERED BY esri

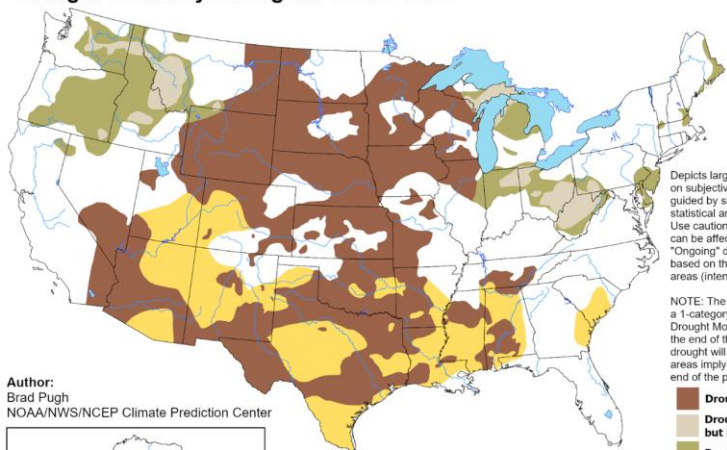
- **Temperature: Warmer than normal temperatures (a 53% chance) likely to persist November-January (Confidence: Medium-High).** RGV averages: Afternoon – Lower 80s falling to around 70-lower 70s by the end of December through January. Wake-up: Lower 60s falling to 47 to 52 by the end of December through the end of January.
- **Precipitation: Drier than normal conditions (a 57% chance) are expected to continue November-January (Confidence: Medium-High).** RGV averages: 2.7-4.5 inches (west to east; most in November).



The November 2024-January 2025 “Droughtlook”

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

Valid for October 17, 2024 - January 31, 2025
Released October 17, 2024



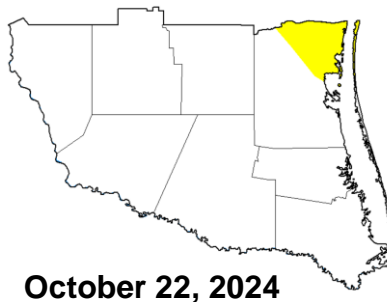
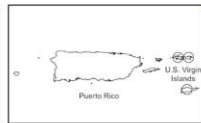
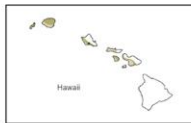
Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. “Ongoing” drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to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

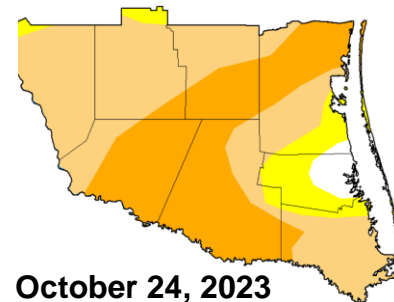
- Drought persists
- Drought remains, but improves
- Drought removal likely
- Drought development likely
- No drought

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

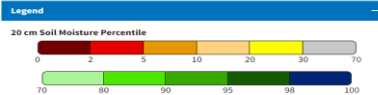
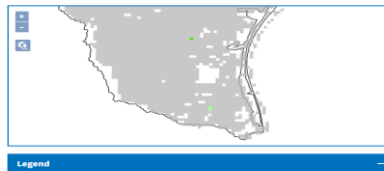
Author:
Brad Pugh
NOAA/NWS/NCEP Climate Prediction Center



October 22, 2024



October 24, 2023



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

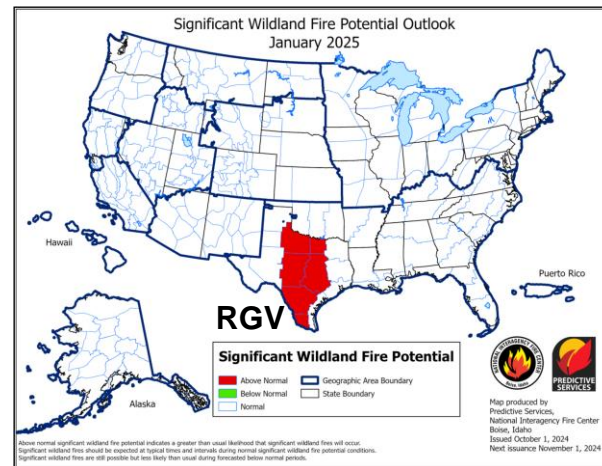
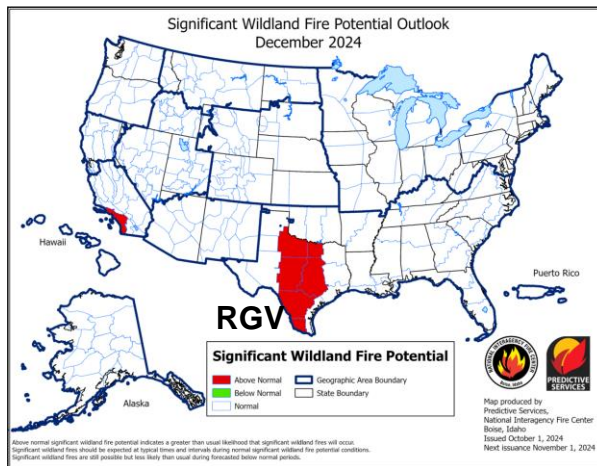
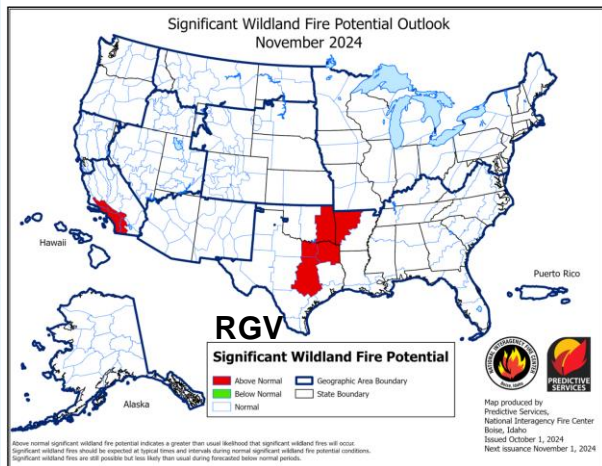
Drought Classification

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

- **What a difference a year makes!** Heavy rains from over the Summer has led to adequate to sufficient soil moisture over the area this year compared to last year when much of the area was still under a Moderate to Severe Drought.
- Factoring in a developing La Nina and climatological trends, the latest seasonal outlook is indicating for drought (left) to expand across the Rio Grande Valley and Deep South Texas ranchlands through late autumn to mid-winter. Moderate to Severe Drought is likely for some.



Wildfire Concerns Increasing This Upcoming Cool Season; Continue Monitoring Trends into early 2025



- **Effective Green** was present across all the lower Rio Grande Valley in late October with **above normal moisture level present**. Effective green faded into the mid- and especially the upper RGV/Rio Grande Plains. **Effective Green** will likely to continue into mid-November in the lower Valley, but signs of curing are likely to increase elsewhere.
- **Above normal** moisture levels will likely *transition* to **average to below average levels** by mid to late **November across the RGV** and Deep South Texas, soonest along/west of IH-69C and US 281.
- **Dry moisture levels** are likely to develop as early as **late November/early December** and prevail through **January**.
- **Bottom Line: Wildfire spread concerns will increase** as we head deeper into autumn and especially winter, as soils become **drier** and **cool fronts** become more frequent and at times stronger. **Continue to watch late this year through early 2025!**



Wildfire Prevention Review

- This remains critical beginning in mid to **late November**, especially if Moderate (level 1) drought develops over still fuel-loaded rangeland north of the populated Valley. The greater threat would begin in **December as Severe (Level 2) Drought could arrive** in some areas.
- Continue to focus on **farm, ranch workers, and other persons who might drive vehicles with hot exhaust/converters** 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

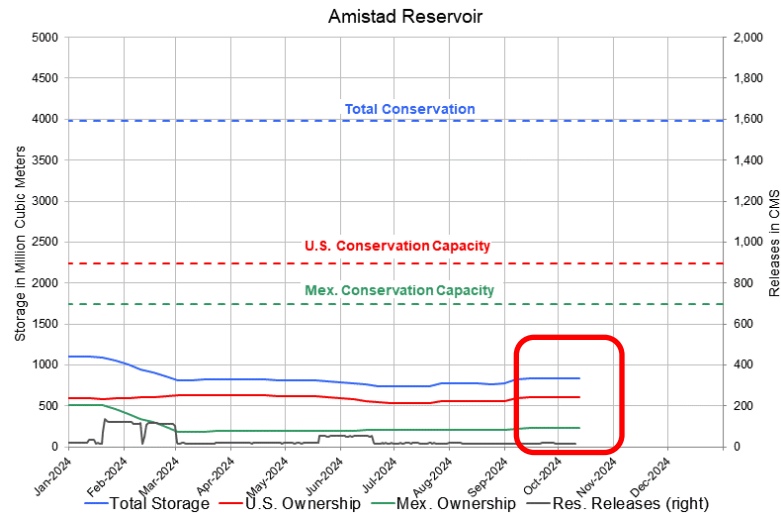
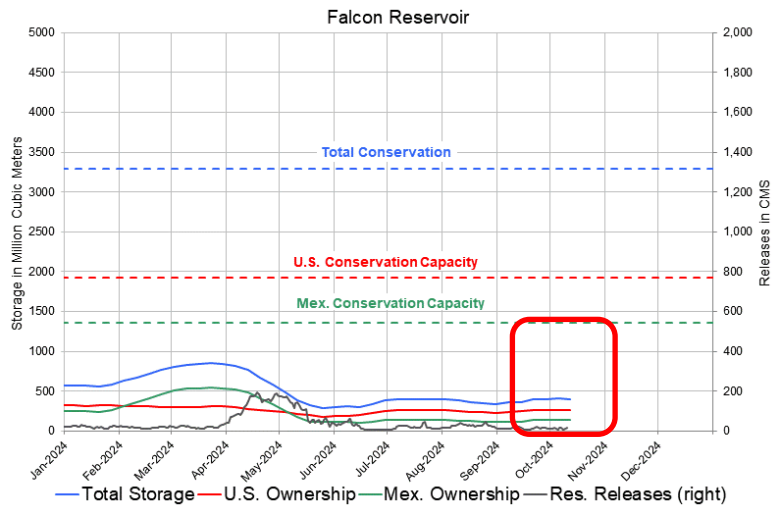
- Tenga cuidado de no arrastrar cadenas de remolque que podrían provocar chispas.
- No se estacione sobre césped seco.
- Evite las quemaduras al aire libre y revise las pilas recientemente quemadas para detectar brotes de fuego.
- Elimine la vegetación muerta alrededor de tu casa.
- Tenga cuidado soldar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



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

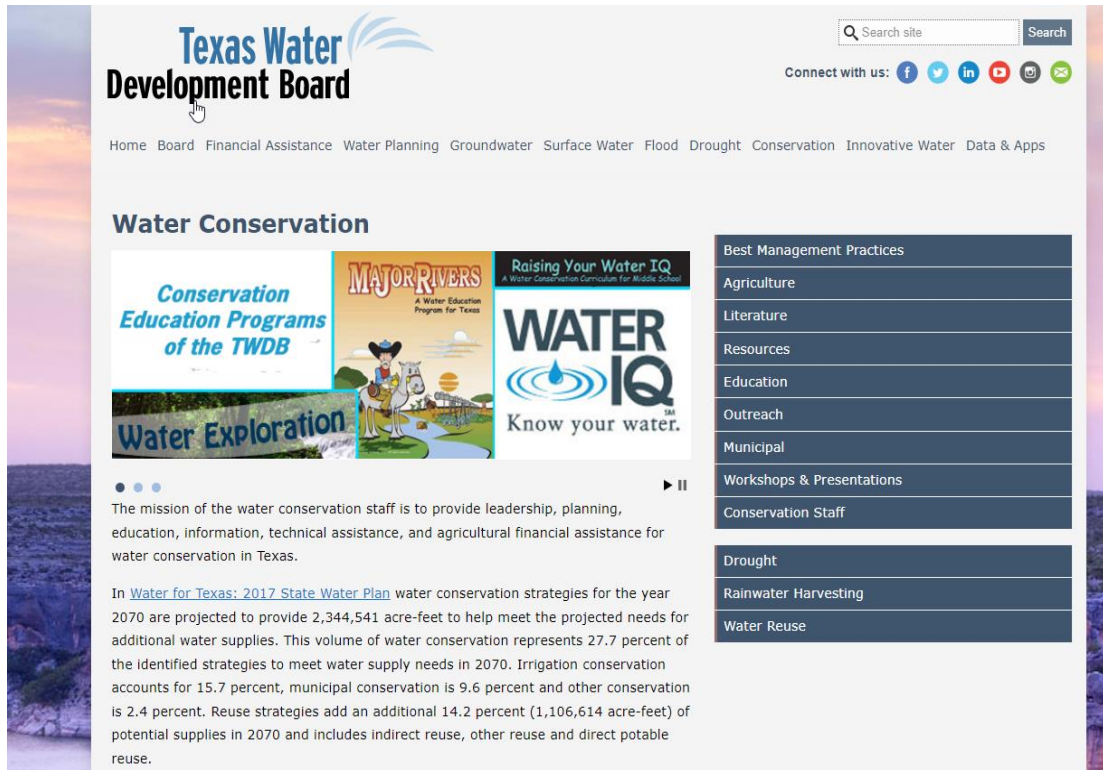


Amistad and Falcon remain at/near Record Lows heading into November



- Falcon remained nearly steady, ending late October at **12.1 percent** (down slightly from **12.3% in late September**). This level is just a few ticks above prior records. The expectation of generally dry and warm conditions, with fronts that add wind and lower humidity, **will allow levels to remain steady or drop slowly through November into early December** – due to longer nights and lower sun angle.
- Amistad remained near all-time record seasonal lows in late October.** Levels were at **20.9% on October 27th** (steady from **21% on September 26th**). Increasing confidence in the drier, still warm, and breezier (pre and post front) conditions in November and early December suggests continued **steady-state or slow drops** in the level through this time.

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 three educational materials: "Conservation Education Programs of the TWDB", "MAJOR RIVERS A Water Education Program for Texas", and "Raising Your Water IQ A Water Conservation Curriculum for Middle School". Below the carousel is a paragraph stating the mission of the water conservation staff. To the right of the main content 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-links for Rainwater Harvesting and Water Reuse.

Texas Water Development Board

Home Board Financial Assistance Water Planning Groundwater Surface Water Flood Drought Conservation Innovative Water Data & Apps

Water Conservation

Conservation Education Programs of the TWDB

MAJOR RIVERS
A Water Education Program for Texas

Raising Your Water IQ
A Water Conservation Curriculum for Middle School

WATER IQ
Know your water.

Water Exploration

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.

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.

Best Management Practices

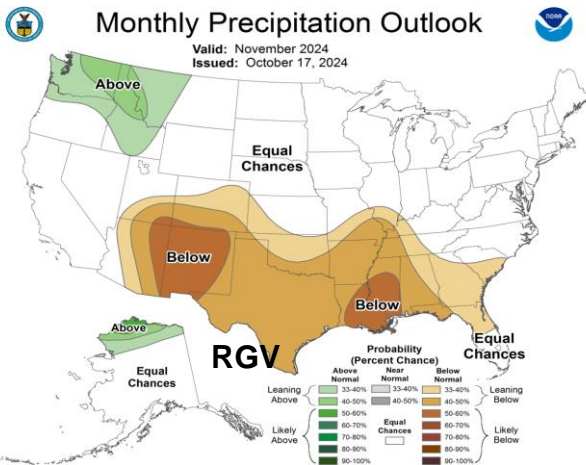
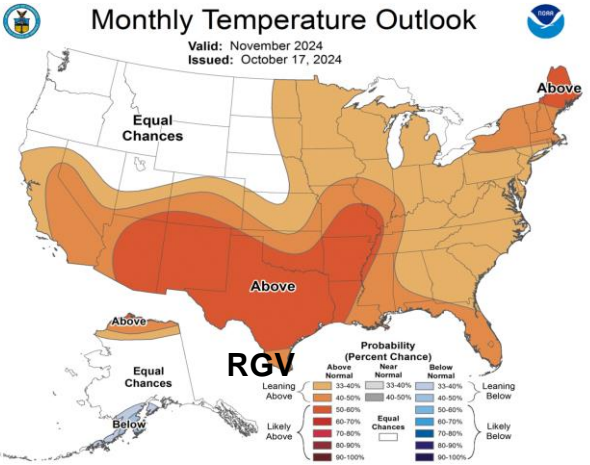
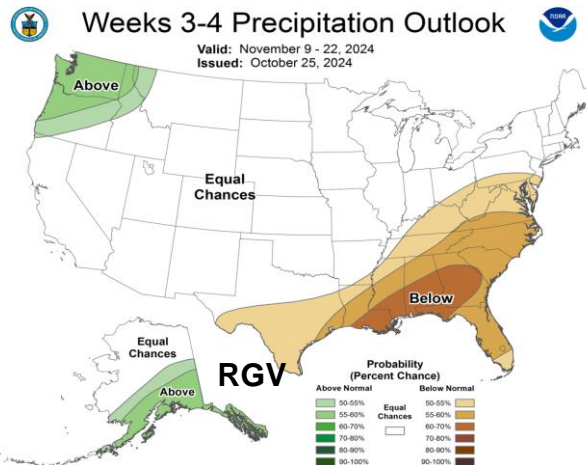
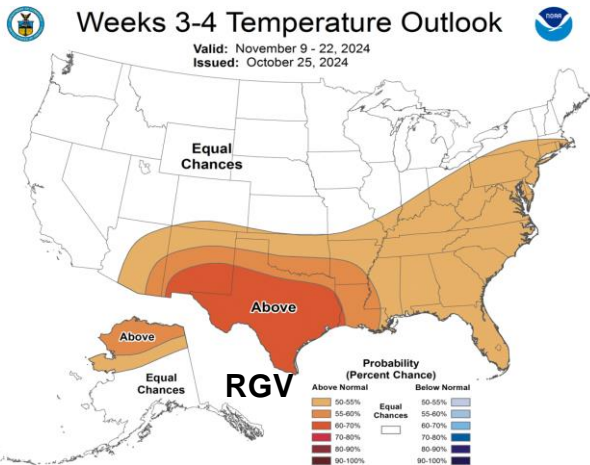
- Agriculture
- Literature
- Resources
- Education
- Outreach
- Municipal
- Workshops & Presentations
- Conservation Staff

Drought

- Rainwater Harvesting
- Water Reuse

- “Stage 2/3” Restrictions continued through October 2024 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](#)

November 2024: Confidence: Medium-High on Temperature, Medium on Precipitation Trends

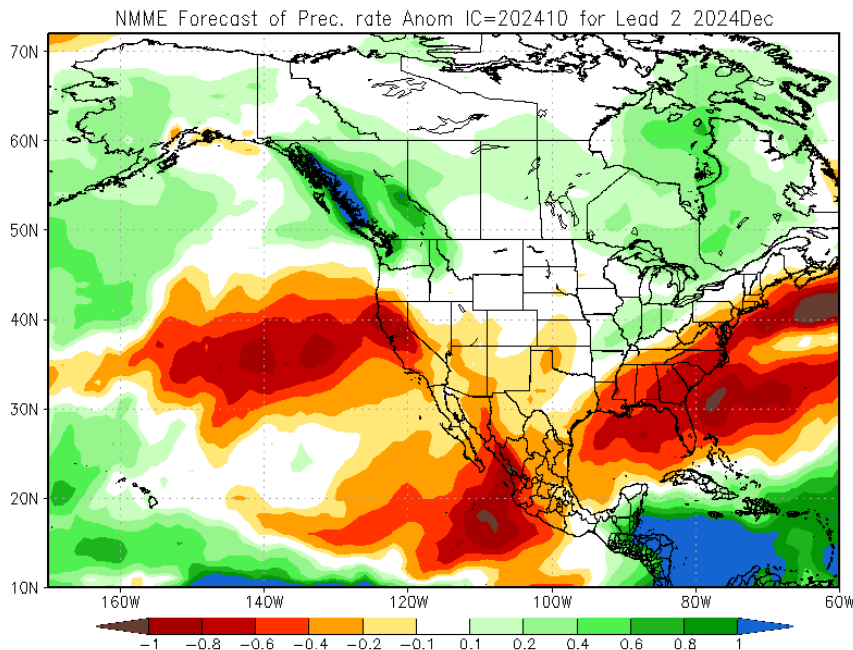


- Medium to long-range forecast models continue to suggest the mid-upper level atmospheric steering pattern remaining in a flat/stable state.
- This pattern suggest for temperatures to run **warmer than normal** through November and into December.
- Additionally, this pattern suggest a **drier than normal pattern** taking shape as November progresses and we move into December.



Early Look: December 2024

Potential rainfall rate anomaly, December 2024

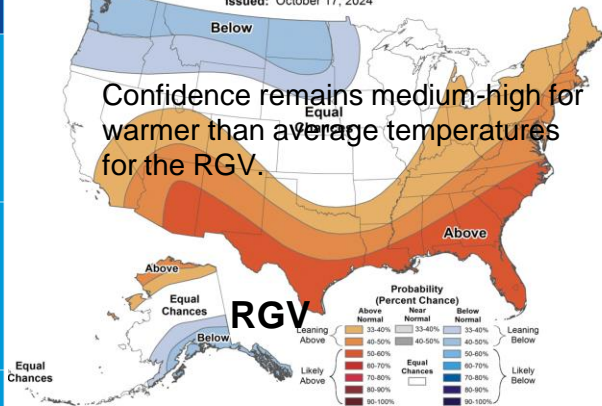


- This model's forecast for December suggest a **dry pattern** (note the brown colors over the area and nearby red color) continuing. It's worth noting that this time of the year is well into our typical dry season.
- **Cold fronts** moving into Texas will increase! Most will likely be dry, but there could be some strong ones that could reach the Valley/Deep South Texas ranchlands and perhaps could help set off showers and thunderstorms (on occasion).

Winter (2024/2025) through Spring 2025: Warmer and Drier than Normal Trends Remain Favored

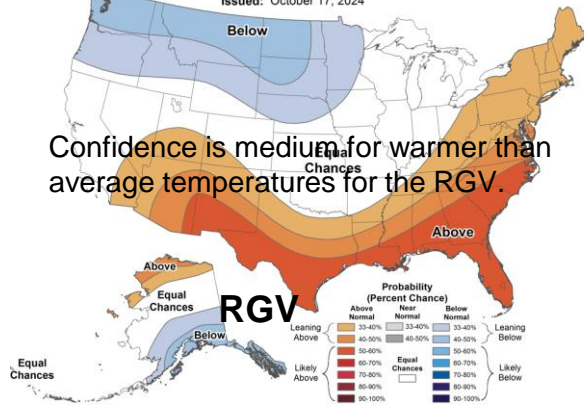
Seasonal Temperature Outlook

Valid: Dec-Jan-Feb 2024-25
Issued: October 17, 2024



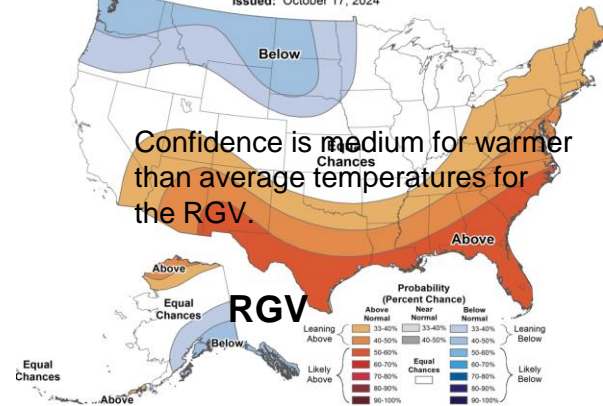
Seasonal Temperature Outlook

Valid: Jan-Feb-Mar 2025
Issued: October 17, 2024



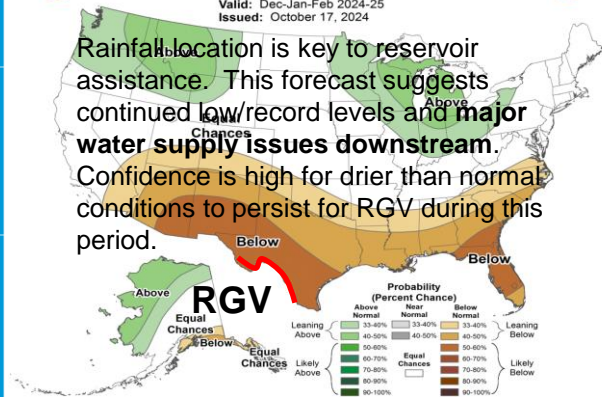
Seasonal Temperature Outlook

Valid: Feb-Mar-Apr 2025
Issued: October 17, 2024



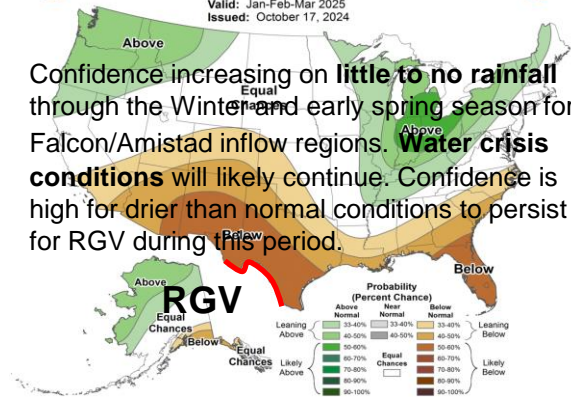
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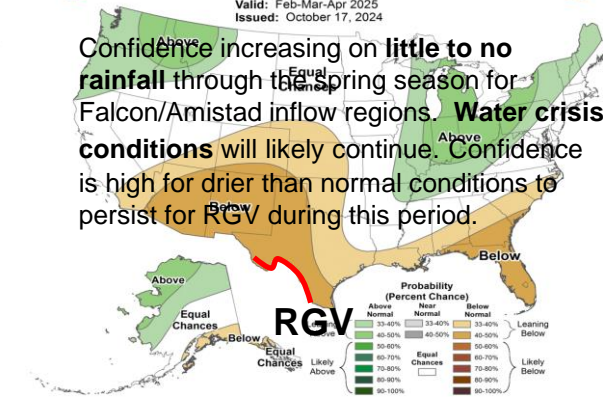
Seasonal Precipitation Outlook

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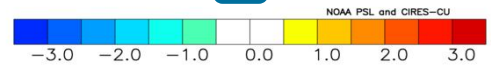
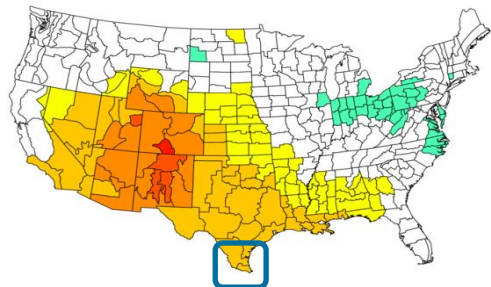
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Valid: Feb-Mar-Apr 2025
Issued: October 17, 2024

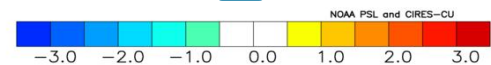
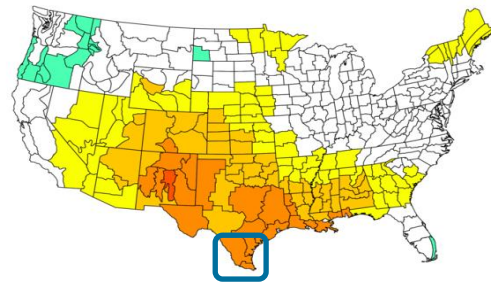


Comparing Similar El Niño to La Niña Episodes within the last 30 years; Nov-Jan Periods

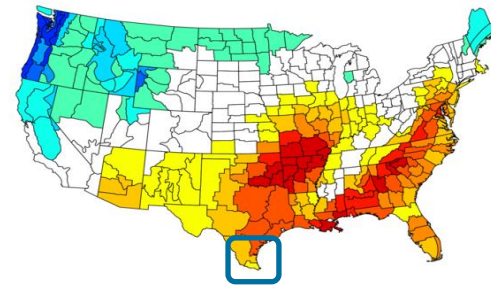
NOAA/NCEI Climate Division Composite Temperature Anomalies (F)
Nov to Jan 2005-06,2008-09,2017-18,2010-11,2016-17,1998-99
Versus 1991-2020 Longterm Average



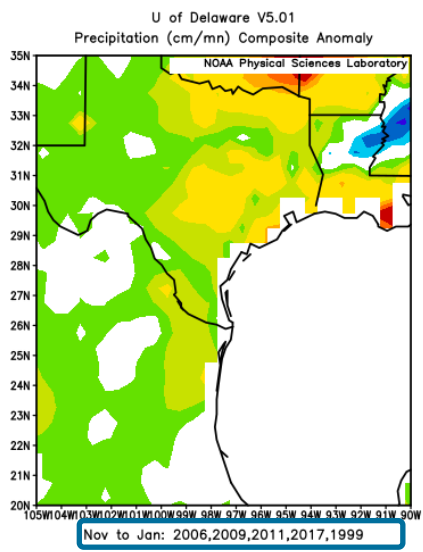
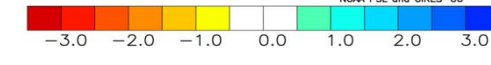
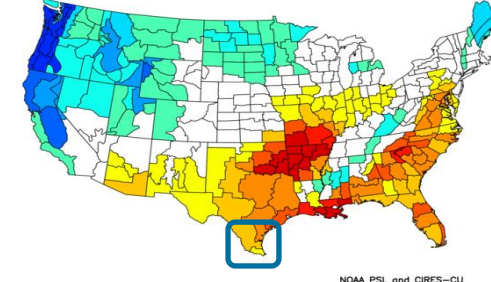
NOAA/NCEI Climate Division Composite Temperature Anomalies (F)
Nov to Jan 2005-06,2008-09,2010-11,2016-17,1998-99
Versus 1991-2020 Longterm Average



NOAA/NCEI Climate Division Composite Precipitation Anomalies (in)
Nov to Jan 2005-06,2008-09,2017-18,2010-11,2016-17,1998-99
Versus 1991-2020 Longterm Average



NOAA/NCEI Climate Division Composite Precipitation Anomalies (in)
Nov to Jan 2005-06,2008-09,2010-11,2016-17,1998-99
Versus 1991-2020 Longterm Average



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

- **Top:** Composite temperature (left) and precipitation (right) anomalies for similar El Niño to La Niña transition episodes leading into November-January, since 1950.
- **Bottom:** Same, except for 2017/18 season.

Bottom Lines

- 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.**
- **Wildfire growth and spread** is expected to become more of an issue by **late November-December and into early 2025**, as **soils continue to dry** and **cool fronts with drier/much drier air following them** continue to *increase*. Farmers/ranchers should be ready to **implement fire safety rules.**
- La Niña is still expected to develop between November and mid-December. This will support **warmer than normal conditions** and **drier than normal conditions** through late autumn 2024 and into winter 2024/2025. **Dryness** and drought will *expand* from west to east across the ranchlands and Valley, especially from late November through January. **Farmers and ranchers may see difficult days ahead** from high (winter) evaporation rates and limited upstream water supplies.
- **“Arctic Express”?** While warmer and drier than normal *seasonal* conditions are expected, a 20-30% chance for a **hard freeze or ice storm** is in the mix! [December 22-24, 2022](#), and [January 15-17, 2024](#), were recent cases. **December 20th, 2024 through January 31st, 2025, is the window.** Be prepared.

