# 2026-27 Preliminary Winter Weather Outlook

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Resource Entity and TSP Winter Weather Preparedness Workshop
Preliminary 2026-27 Winter Weather Outlook
October 22, 2026

# Agenda

- Review of the 2026 year-to-date weather
- Brief look at the current fall season
- Review of last winter and examination of recent extremes
- Preliminary expectations for the upcoming winter



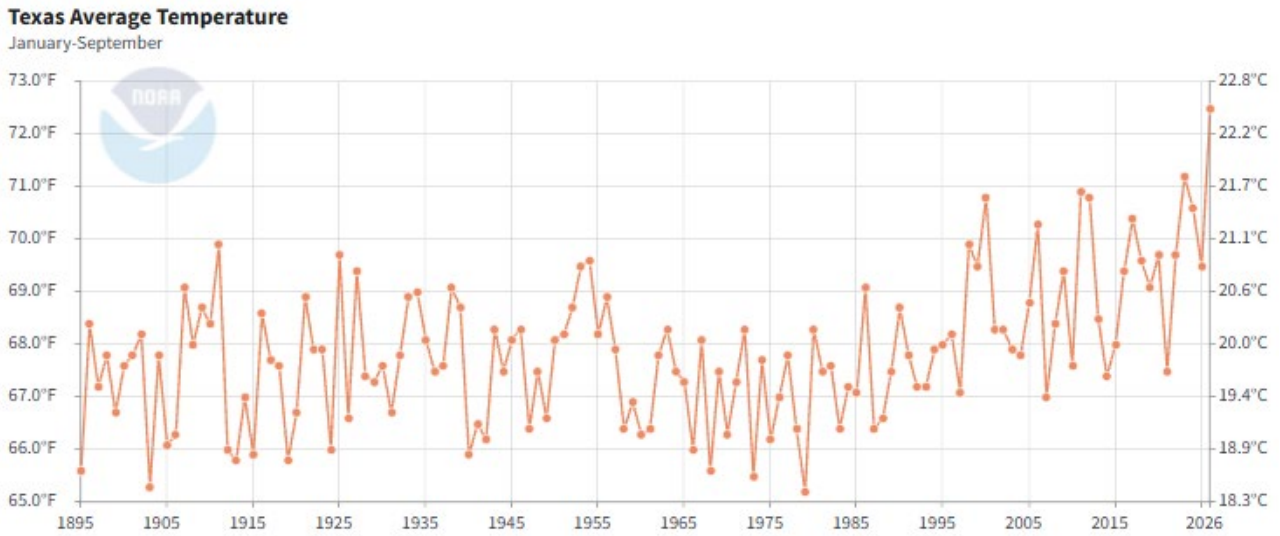
# 2026 Year-to-Date Review

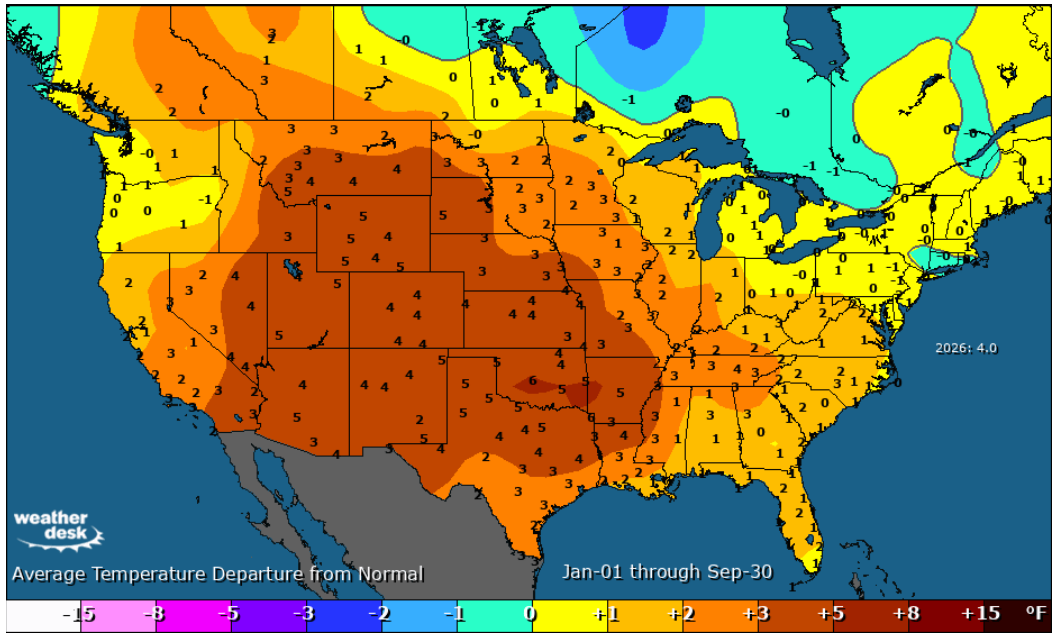
January through September 2026 ranked as the warmest first 9 months of the year for Texas, dating back to 1895

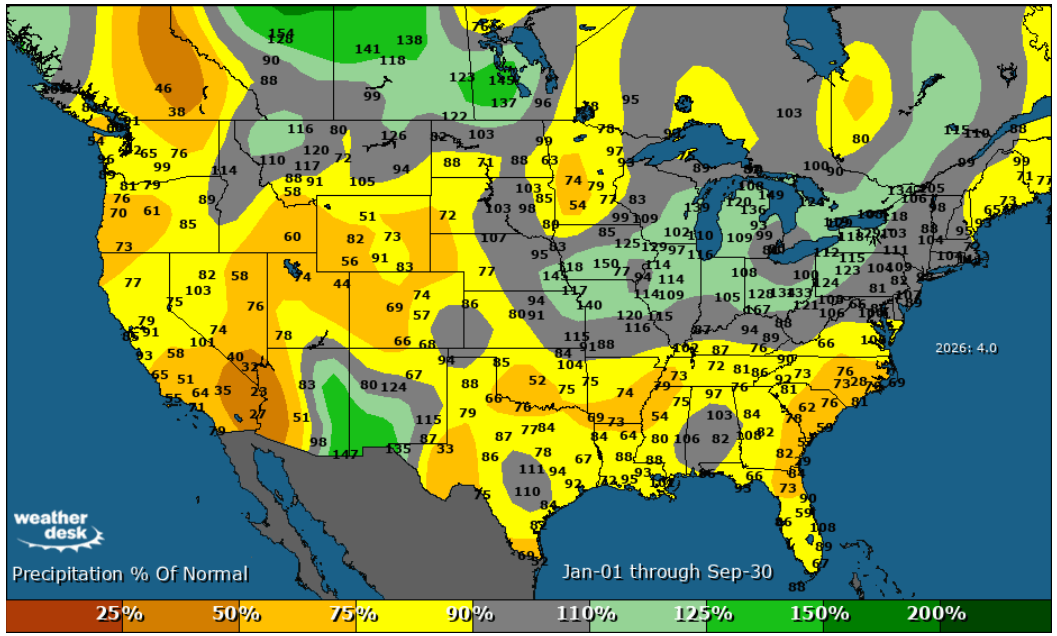
#1: 2026, #2: 2023, #3: 2011, #4: 2000, #5: 2012

January through September 2026 ranked as the 38th driest first 9 months of the year for Texas

This was the driest first three-quarters of the year since 2023



# 2026 Summer Weather

**2026 Summer (June-September):**
**3rd hottest since 1895 (132 years, based on mean temperatures)**
#1: 2011, #2: 2023, #3: 2026

**June-July 2026 ranked 11th hottest**

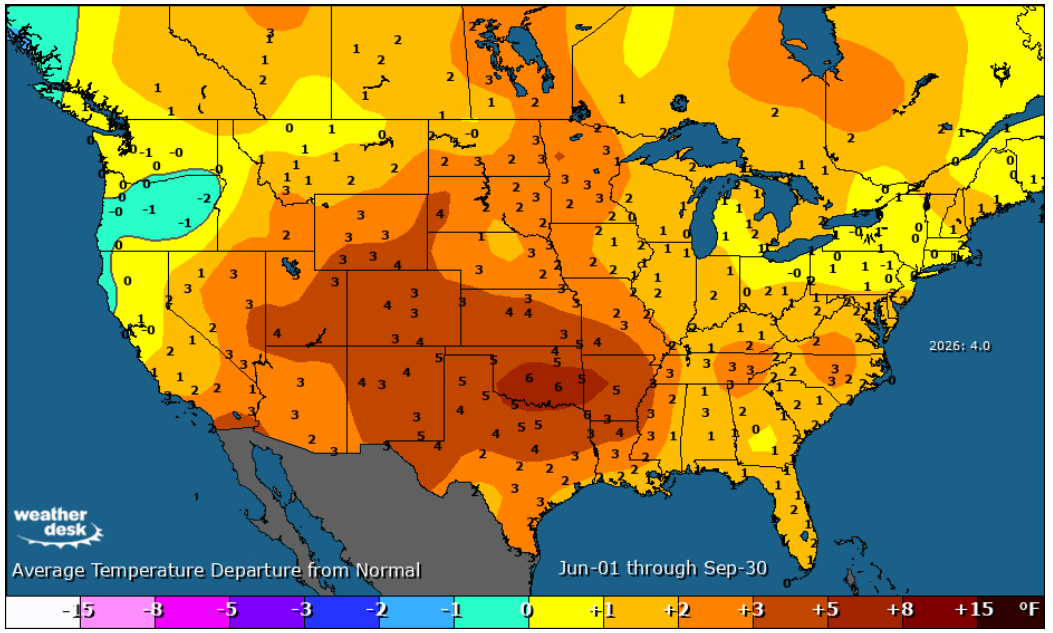
**August-September 2026 ranked #1 Hottest all-time**

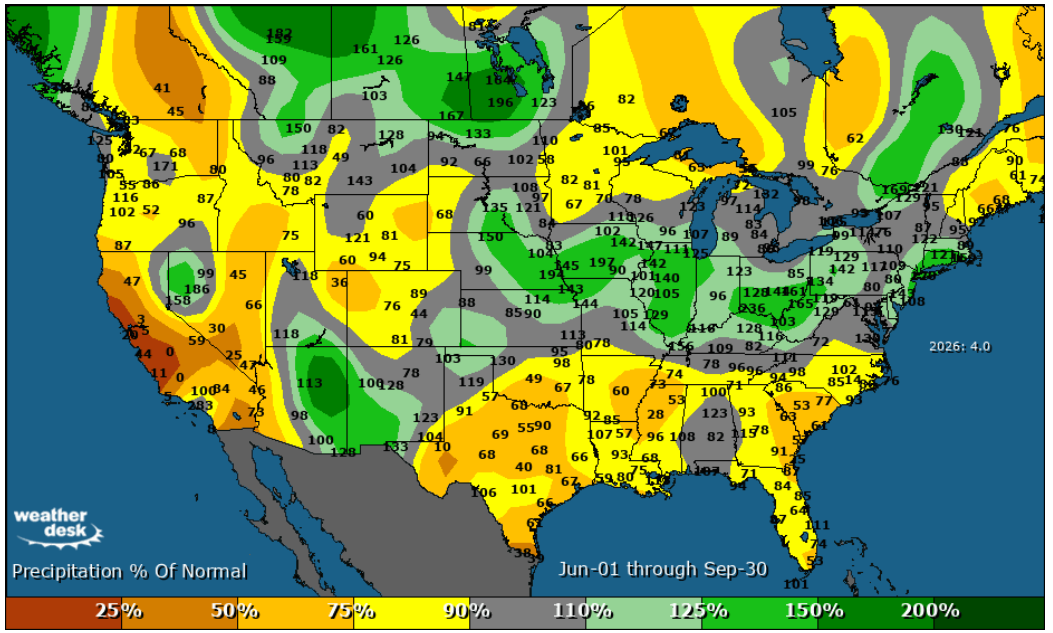
**38th driest summer season**
**Driest since 2023**

**Huge contrast between the first half and second half of the summer**

**93rd driest June-July (wettest third of all historical first halves of summer)**

**4th driest August-September (driest Since 2011)**



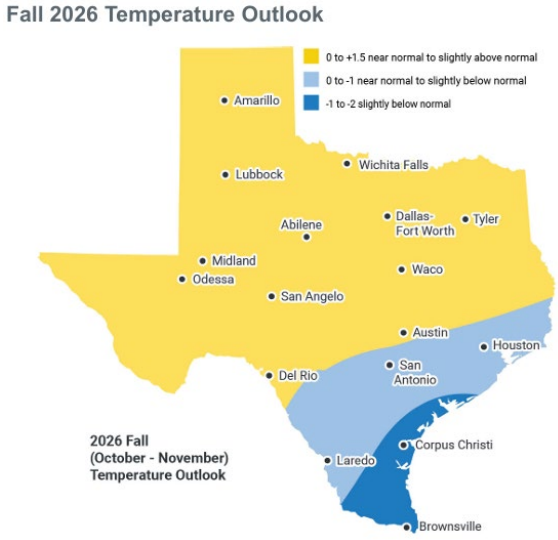
# Preliminary 2026 Fall Weather Outlook

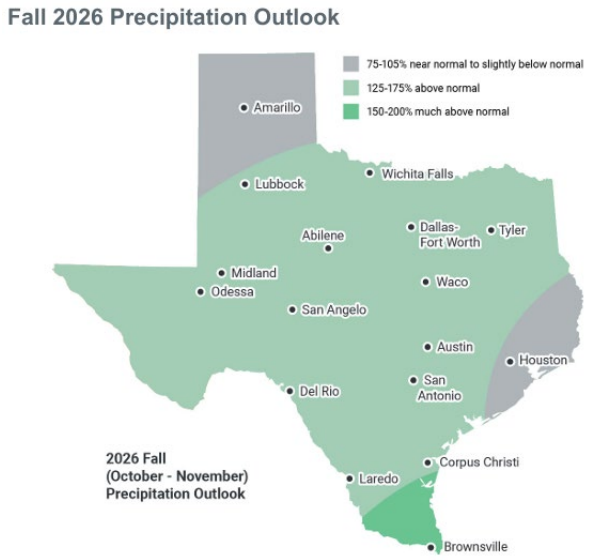
The upcoming fall season suggests mostly above normal temperatures and mostly above normal precipitation

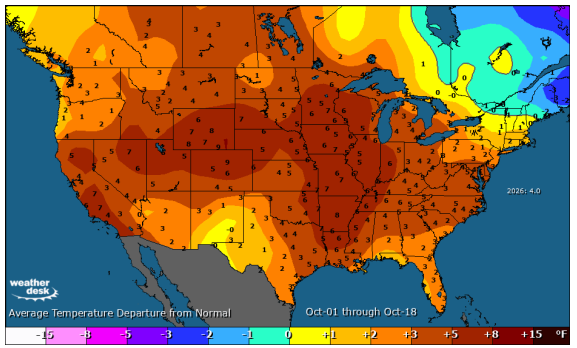
2023 was the primary analog applied to the 2026 forecast

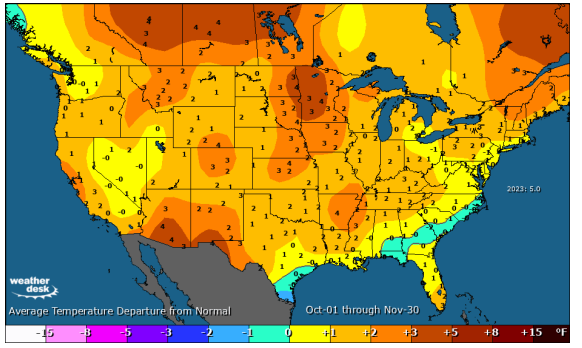
The temperature pattern has been above normal thus far this fall (though the cooler pattern for South Texas has yet to take shape – and may not

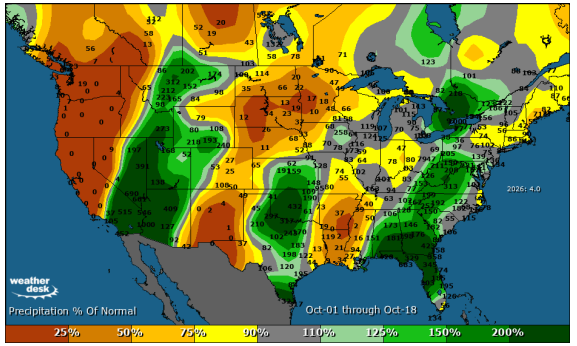
The precipitation pattern has thus far been similar to 2023

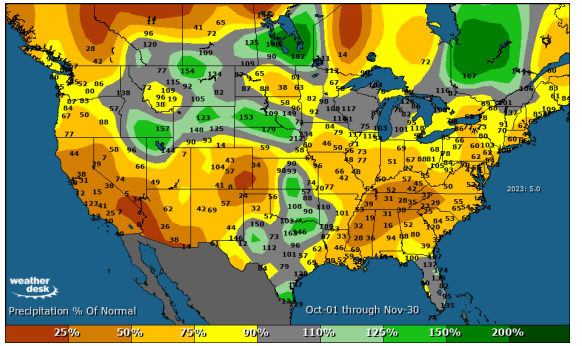


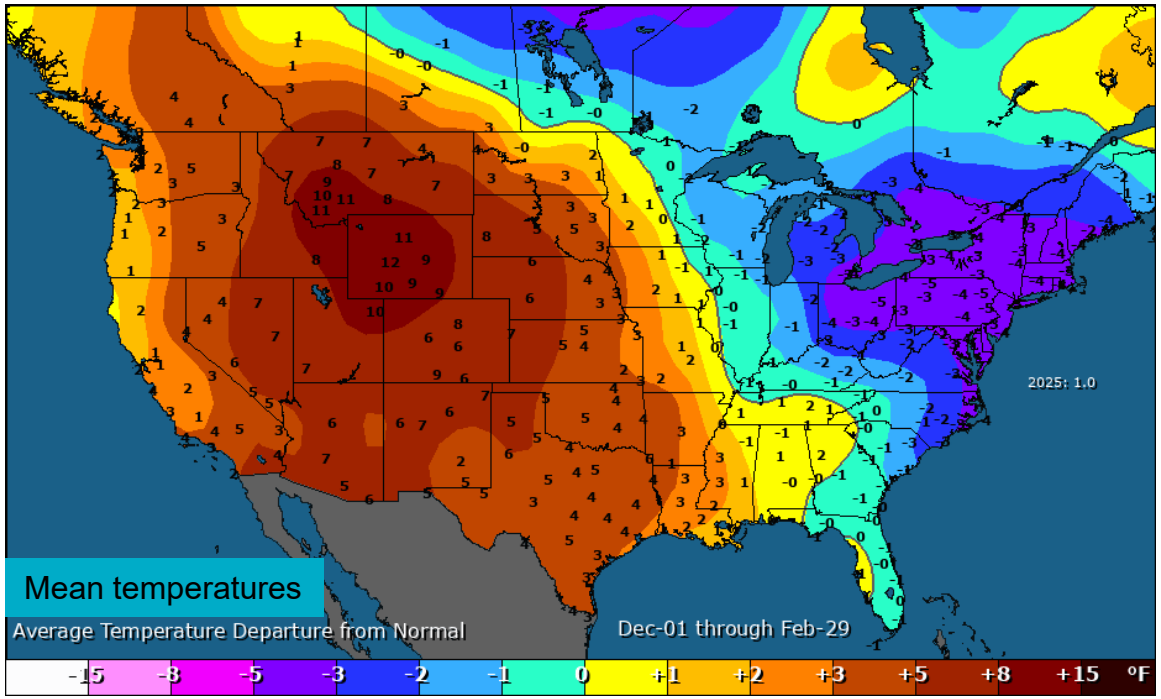



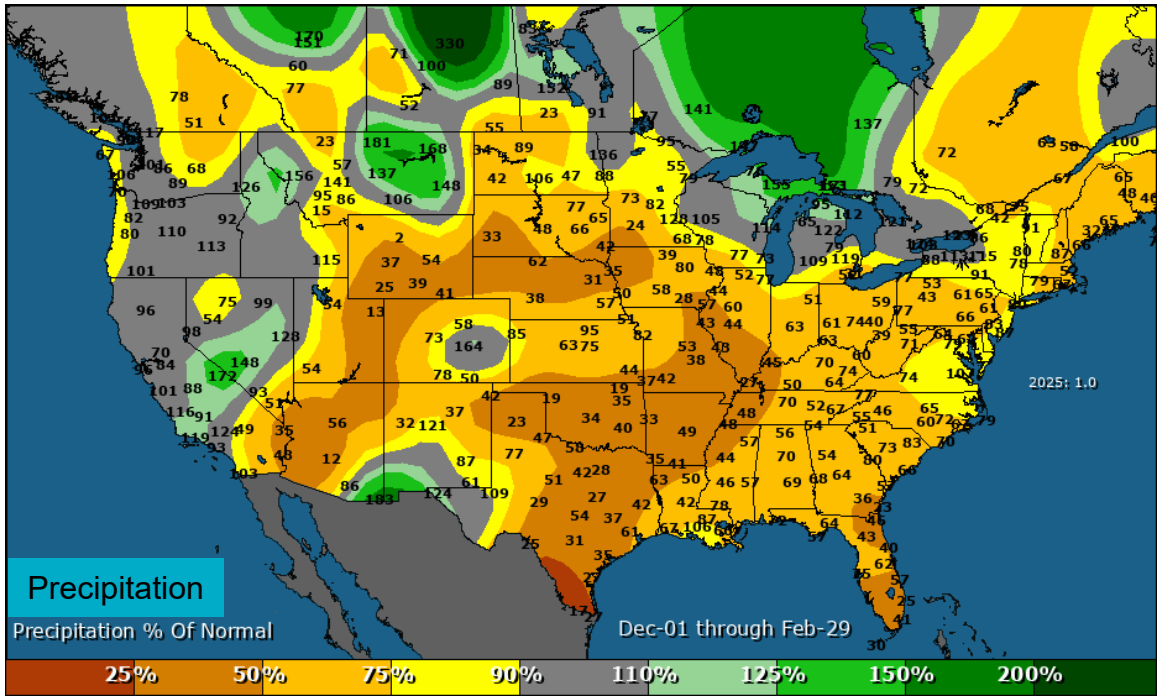




October 2026

Fall 2023
(last strong El Niño)

# 2025-26 Winter Weather Review




Last winter was the **#1 warmest** for the state of Texas, based on both **mean** and **maximum** temperatures (3rd warmest for minimum temperatures)

This surpassed the winter of 2016-17, the previous warmest on record

**Yet – last winter again a had period of extreme cold**
(more on that ahead)

Last winter was the **5th driest** on record (131 historical winters)

It was the **driest** since winter 2008-09

Drought concerns expanded to 99% of the state by winter's end

# 2025-26 Winter Review

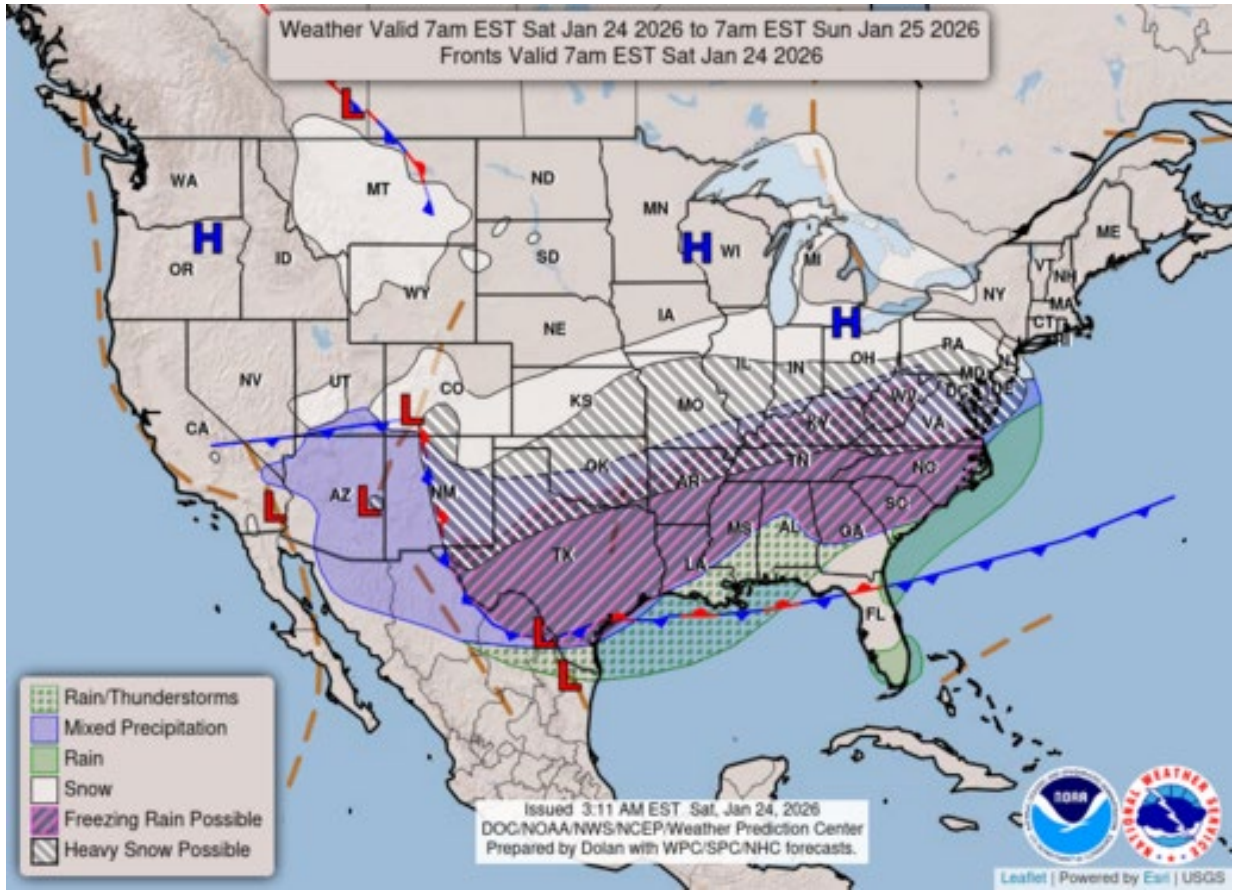
While last winter was the #1 warmest since 1895, there was once again a period of significant winter weather extremes

January 24-27 extreme cold plus mixed frozen precipitation

- Austin fell to 18° the morning of 1/26/26
- Dallas dropped to 13° on 01/25/26
- Houston reached 23° on 01/27/26

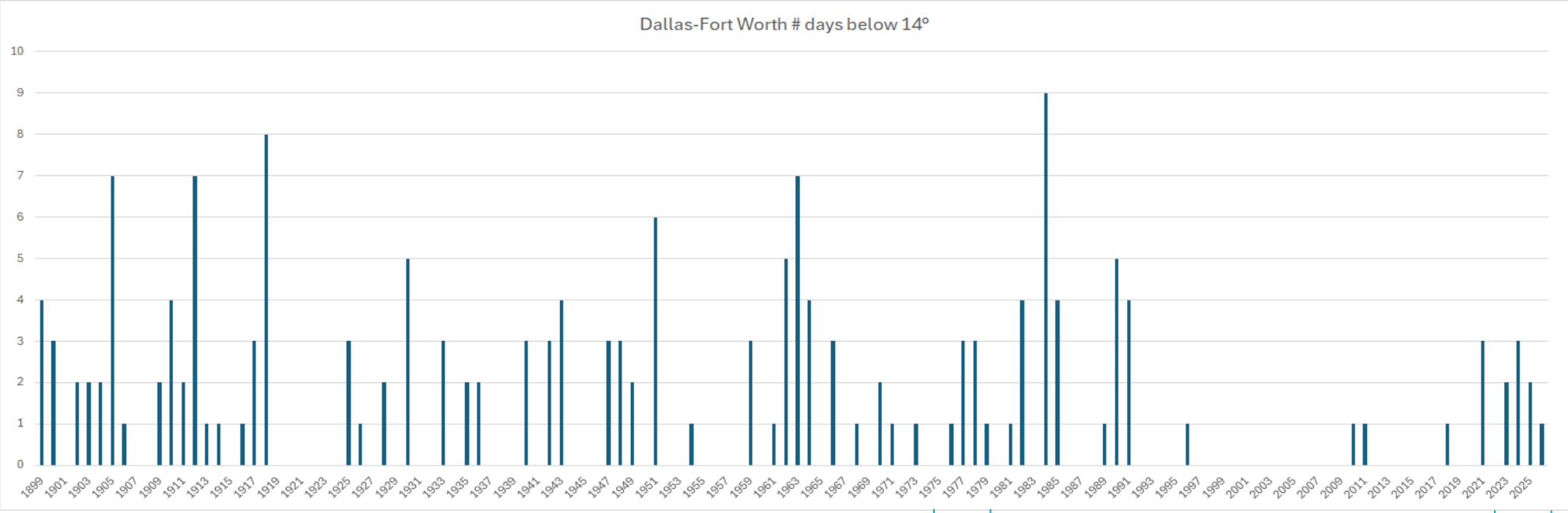
- Lubbock recorded -2° on 01/26/26
  - Coldest day since 1989! (Uri in 2021 was 0)

Last winter was a perfect example of the message stated prior to each winter:
Even very mild, above normal winters can have a period with extreme cold temperatures



# Winter Extremes Becoming More Common

Cold extremes do happen in otherwise warm winters




**Dallas-Fort Worth** has recorded a low below 14° for the past 4 consecutive winters
*2022-23, 2023-24, 2024-25, and 2025-26*
The last time there were at least 4 consecutive winters to meet this criteria was 1976-79

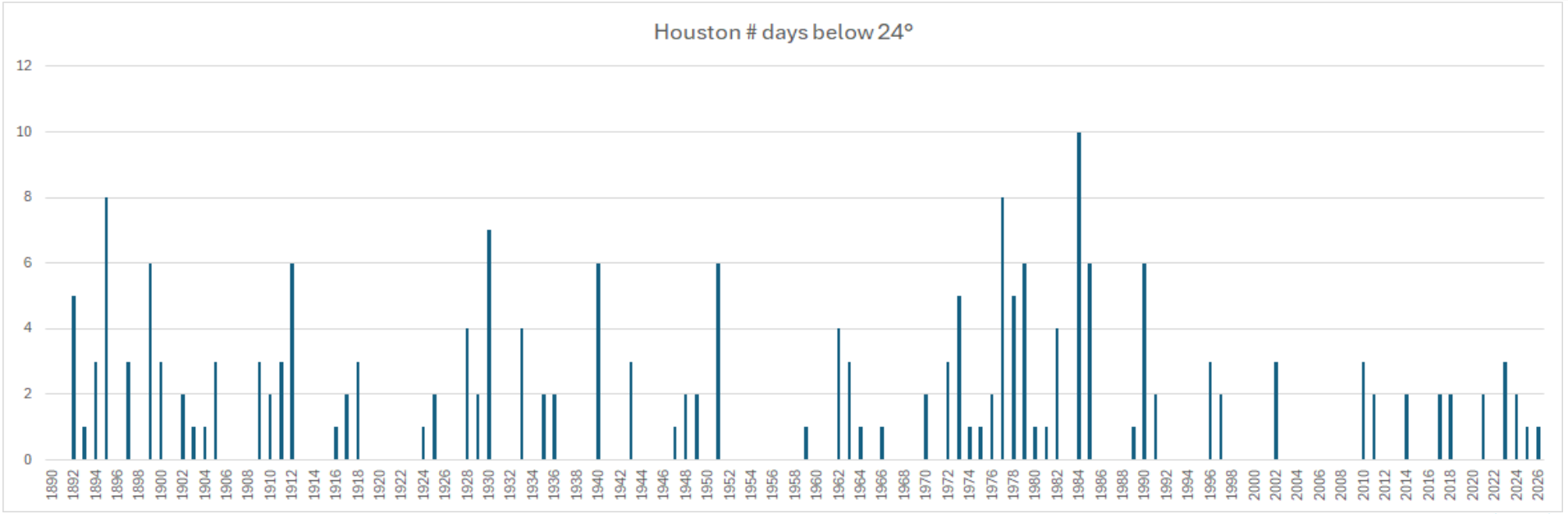
These recent cold extremes have been occurring within some of the warmest winters on record (131 historical)

2025-26: 1st warmest winter
2024-25: 29th warmest winter
2023-24: 12th warmest winter
2022-23: 7th warmest winter

1975-76: 27th warmest
1976-77: 120th warmest
1977-78: 128th warmest
1978-79: 129th warmest

# Winter Extremes Becoming More Common

Cold extremes do happen in otherwise warm winters

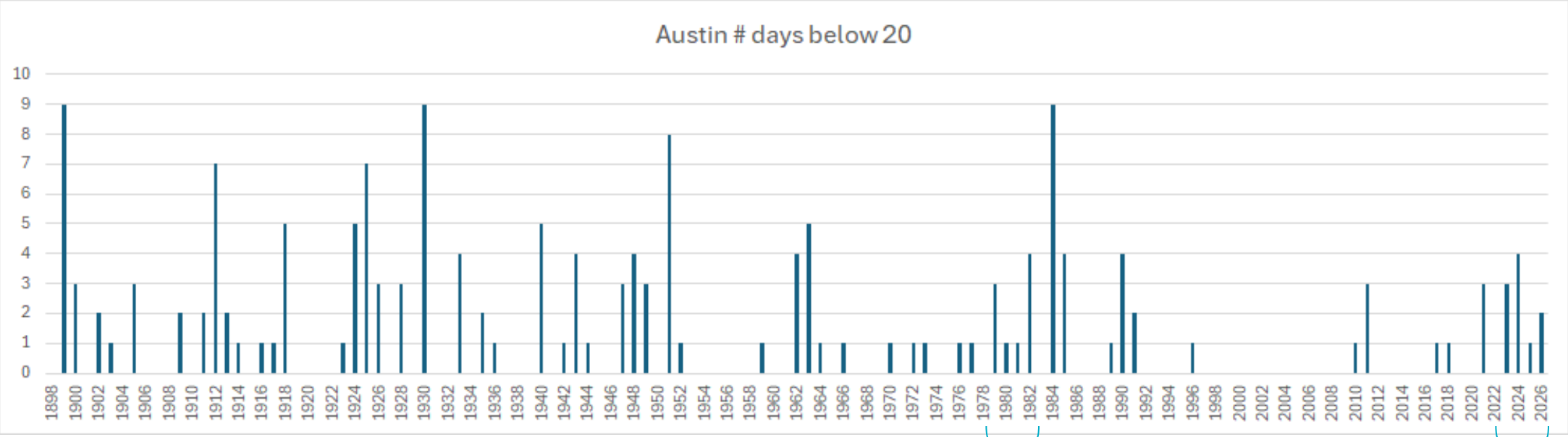



**Houston** has recorded a low below 24° for the past 4 consecutive winters
*2022-23, 2023-24, 2024-25, and 2025-26*
The last time there were at least 4 consecutive winters to meet this criteria was 1972-82
There has not been more than 2 consecutive winters with a low below 24° since 1991

These recent cold extremes have been occurring within some of the warmest winters on record (131 historical)
2025-26: 1st warmest winter
2024-25: 29th warmest winter
2023-24: 12th warmest winter
2022-23: 7th warmest winter

# Winter Extremes Becoming More Common

Cold extremes do happen in otherwise warm winters




**Austin** has recorded a low below 20° for the past 4 consecutive winters
*2022-23, 2023-24, 2024-25, and 2025-26*
The last time that happened was 1979-82
A sub-20 low has NEVER been recorded in 5 consecutive winters

These recent cold extremes have been occurring within some of the warmest winters on record (131 historical)

2025-26: 1st warmest winter
2024-25: 29th warmest winter
2023-24: 12th warmest winter
2022-23: 7th warmest winter

1978-79: 129th warmest
1979-80: 66th
1980-81: 50th
1981-82: 78th

# Mean Temperature Ranking of Recent Texas Winters (131 historical winters)

| | |
|---|---|
| **2025-26** | **131st coldest (1st warmest)** |
| **2024-25** | **103rd** |
| **2023-24** | **120th** |
| **2022-23** | **125th** |
| **2021-22** | **112th** |
| 2020-21 | 42nd |
| **2019-20** | **114th** |
| 2018-19 | 94th |
| 2017-18 | 76th |
| **2016-17** | **130th** |
| **2015-16** | **120th** |
| 2014-15 | 68th |
| **2013-14** | **30th** |
| **2012-13** | **111th** |
| 2011-12 | 99th |

5 of the 12 warmest winters on record have occurred since 2015-16

Since 2001, only 3 winters have ranked in the coldest third (1-44) of historical winters (2009-10 is the other)

# Austin Freezes

Note the 2000-01 through 2004-05 period
**The coldest days were all 23° or warmer – yet those were some of Austin's coldest winters**

Now look at 2021-22 through 2025-26
**The coldest days were all 21° or colder – yet those were some of Austin's warmest winters**

The cold winters in the first part of this century were mostly due to a lack of warm days rather than periods of extreme cold

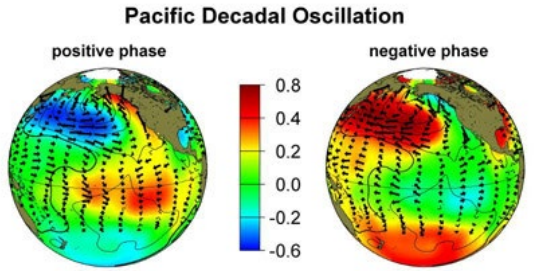
In more recent winters this century, the winters have been quite warm – with the occasional period of extreme cold

This theme is prevalent throughout Texas; Austin just serves as an example, being near the middle of the state

**Key Takeaway**: a winter seasonal outlook does not serve as a good indicator for brief periods of extreme cold

| Austin Camp Mabry Dec - Feb | total # of freezes | total # at/below 40 | coldest temp | winter temperature rank |
|---|---|---|---|---|
| 2025-26 | 9 | 31 | 18 | 26 |
| 2024-25 | 16 | 36 | 18 | 14 |
| 2023-24 | 8 | 33 | 16 | 19 |
| 2022-23 | 14 | 30 | 15 | 23 |
| 2021-22 | 15 | 35 | 21 | 18 |
| 2020-21 | 16 | 38 | **7** | 6 |
| 2019-20 | 3 | 24 | 30 | 21 |
| 2018-19 | 5 | 27 | **32** | 11 |
| 2017-18 | 15 | 36 | 18 | 8 |
| 2016-17 | 5 | **16** | 19 | **27** |
| 2015-16 | **4** | 29 | 31 | 22 |
| 2014-15 | 11 | 41 | 23 | 4 |
| 2013-14 | 22 | 48 | 22 | 5 |
| 2012-13 | 11 | 33 | 27 | 24 |
| 2011-12 | 7 | 23 | 27 | 16 |
| 2010-11 | 19 | 46 | 17 | 10 |
| 2009-10 | **23** | **51** | 17 | **1** |
| 2008-09 | 11 | 42 | 28 | 20 |
| 2007-08 | 14 | 41 | 25 | 15 |
| 2006-07 | 13 | 43 | 24 | 6 |
| 2005-06 | 8 | 35 | 23 | 18 |
| 2004-05 | 13 | 26 | 24 | 13 |
| 2003-04 | 6 | 36 | 28 | 12 |
| 2002-03 | 9 | 41 | 24 | 3 |
| 2001-02 | 11 | 44 | 25 | 8 |
| 2000-01 | 16 | 50 | 27 | 2 |
| 1999-00 | 6 | 27 | 26 | 25 |
| | | | | |
| Averages: | 11.5 | 35.6 | 22.7 | coldest = 1 |
| | 12 | 36 | 23 | warmest = 27 |

# El Niño and PDO -- Unusual Pattern




Fastest changeover from La Niña to El Niño on record (since 1950)

| 2026 | -0.9 | -0.7 | -0.4 | 0 | 0.5 | 1.0 | 1.4 | 1.7 |
|---|---|---|---|---|---|---|---|---|
| Year | DJF | JFM | FMA | MAM | AMJ | MJJ | JJA | JAS |
| 2023 | -0.8 | -0.6 | -0.4 | -0.2 | 0.1 | 0.4 | 0.6 | 0.9 |
| 2002 | -0.1 | 0 | 0 | 0.1 | 0.4 | 0.7 | 0.9 | 1.1 |
| 1997 | -0.2 | -0.1 | 0.2 | 0.5 | 1.0 | 1.3 | 1.7 | 2.0 |
| 1986 | -0.3 | -0.3 | -0.2 | -0.1 | -0.1 | -0.1 | 0.3 | 0.6 |
| 1976 | -1 | -0.6 | -0.3 | -0.1 | 0 | 0.2 | 0.5 | 0.7 |
| 1972 | -0.3 | 0 | 0.4 | 0.8 | 0.9 | 1.1 | 1.3 | 1.5 |
| 1968 | -0.2 | -0.3 | -0.3 | -0.2 | 0.2 | 0.5 | 0.7 | 0.6 |
| 1965 | -0.2 | 0.1 | 0.2 | 0.4 | 0.6 | 1.0 | 1.4 | 1.7 |
| 1963 | -0.4 | -0.1 | 0.2 | 0.2 | 0.2 | 0.4 | 0.7 | 1.0 |
| 1951 | -0.5 | -0.2 | 0.3 | 0.6 | 0.6 | 0.7 | 0.7 | 0.8 |

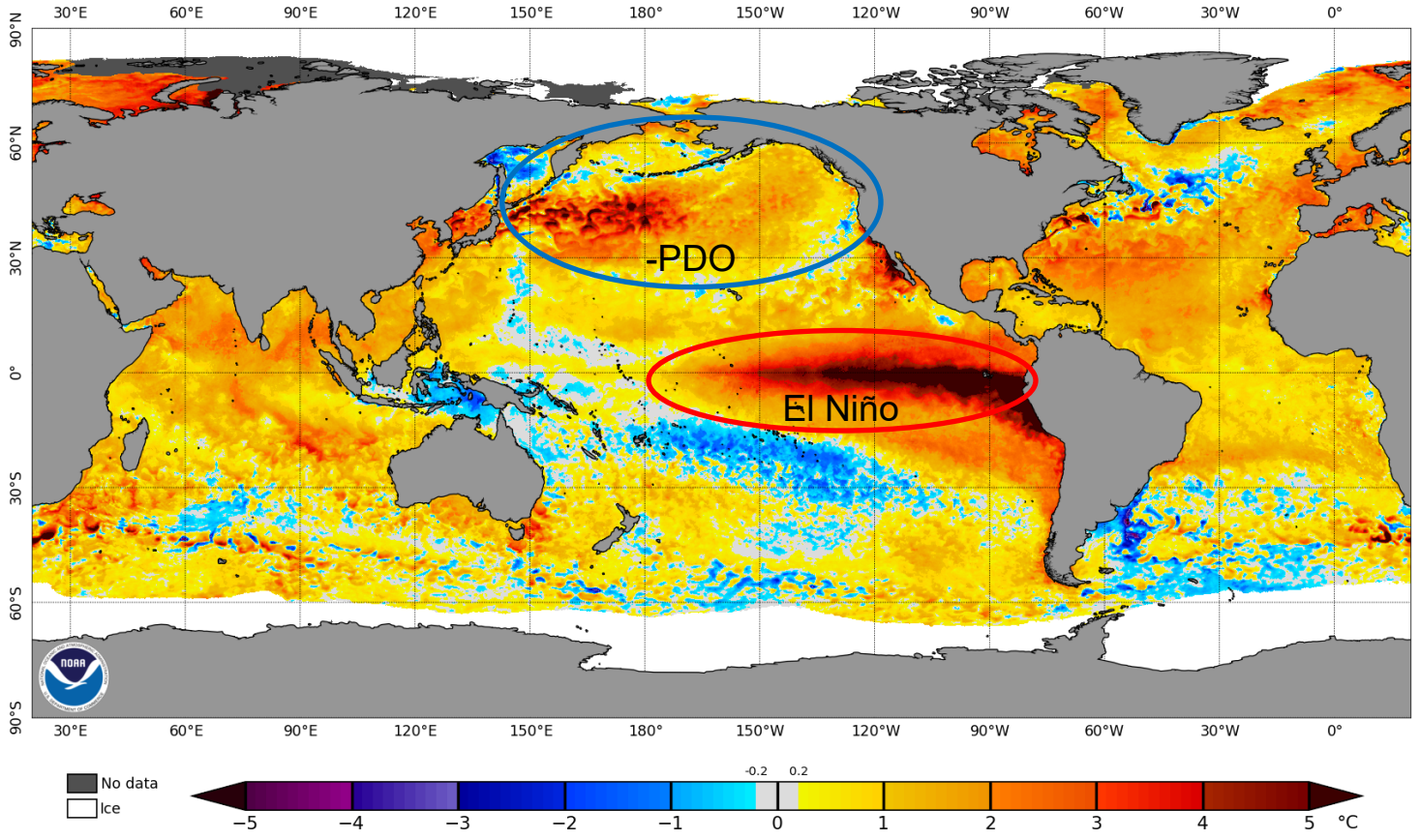
El Niño (especially strong cycles) occurring during a negative PDO (Pacific Decadal Oscillation) are uncommon; however, we just saw this in 2023

## Strong El Niño with –PDO

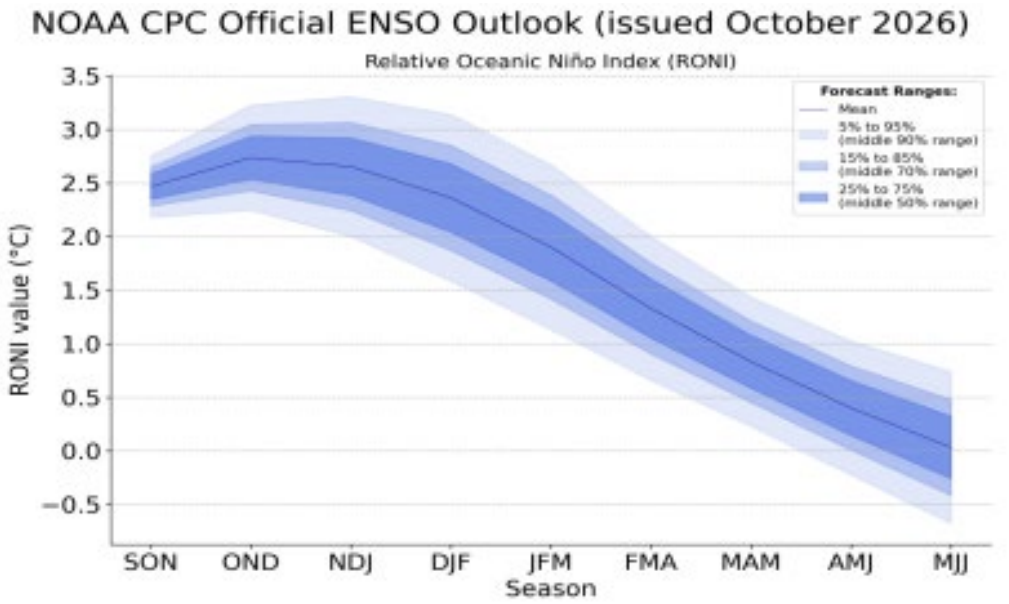
2026-27: TBD
2023-24: 120th coldest winter

1972-73: 8th coldest winter
1965-66: 24th coldest winter
1957-58: 35th coldest winter
(the 3 above trended to a +PDO briefly)

NOAA Coral Reef Watch Daily 5km SST Anomalies (v3.1) 17 Oct 2026



# El Niño




- El Niño reached very strong intensity (+2.0°C or greater) as of September and has reached +2.4°C in October
- This Super El Niño will be one of the 3 strongest on record (1982-83, 1997-98)
- The current El Niño will continue through the upcoming winter

**The coldest winter this century was during an El Niño**
-- but many more **warm** winters since 1991-92

El Niño winters (**bold** = strong):

**2023-24**: 125th coldest
2018-19: 94th coldest
**2015-16**: 120th coldest
2014-15: 68th coldest
**2009-10**: 8th coldest
2006-07: 44th coldest
2004-05: 109th coldest
2002-03: 64th coldest
**1997-98**: 92nd coldest
1994-95: 116th coldest
1992-93: 72nd coldest
**1991-92**: 96th coldest
1987-88: 31st coldest
1986-87: 58th coldest
**1982-83**: 44th coldest
1977-78: 4th coldest
1976-77: 12th coldest
**1972-73**: 8th coldest
1969-70: 48th coldest
1968-69: 81st coldest
**1965-66**: 24th coldest
1963-64: 5th coldest
1958-59: 26th coldest
**1957-58**: 35th coldest
1953-54: 93rd coldest
1951-52: 126th coldest

Red = warmest third of all winters
Blue = coldest third of all winters
Black = middle third of all winters (1895-current)

# 2026-27 Winter Historical Matches (Analogs)

OVERALL (as of 10/20/26)

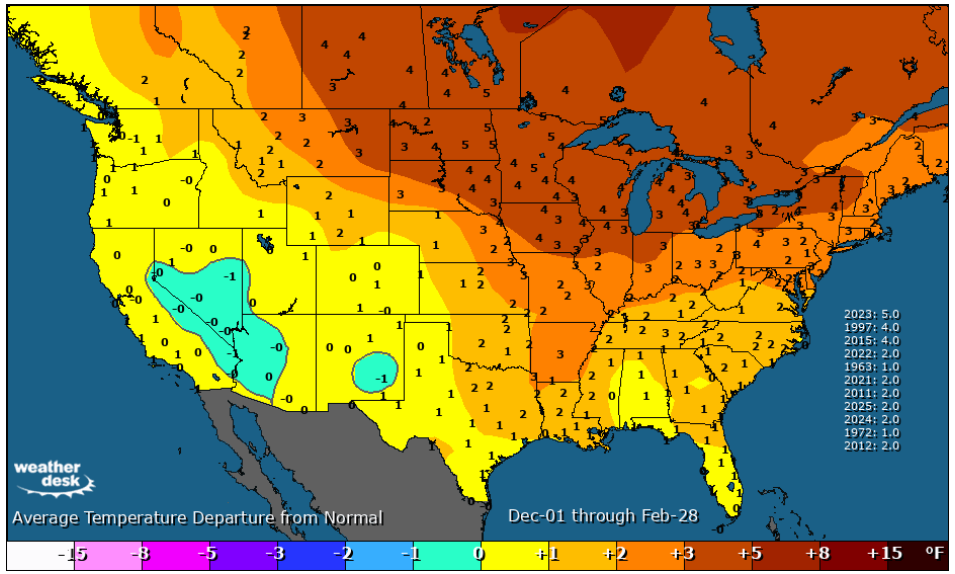
1. 2023-24

2. 1997-98
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4. 2022-23
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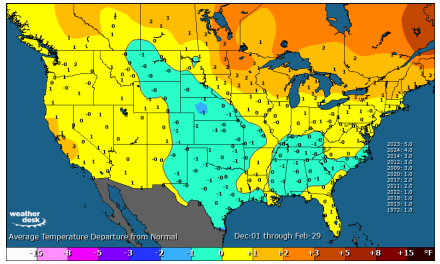
10. 1972-73
11. 1963-64

Analogs are listed in priority order



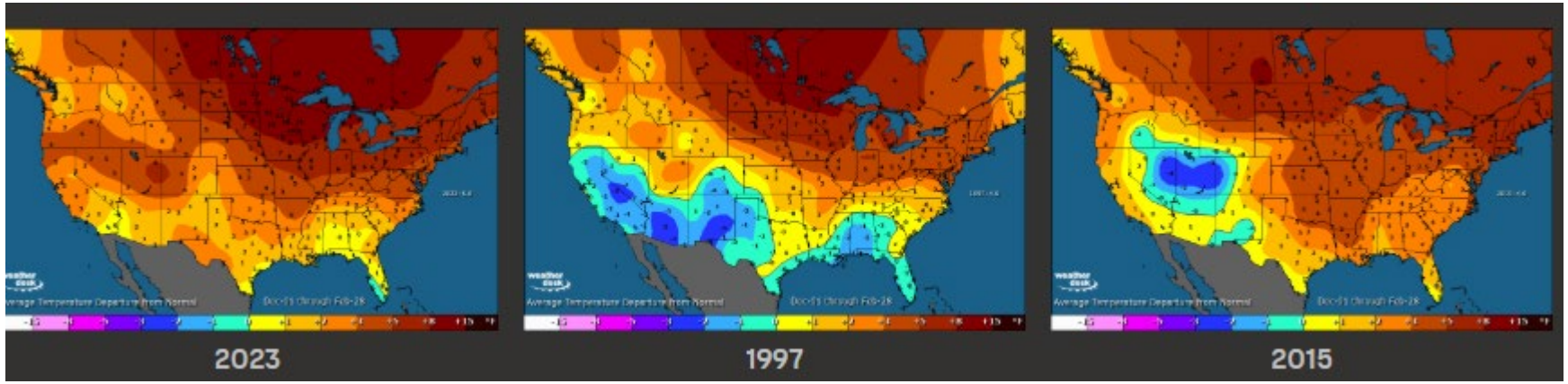

The analog composite results in this map

Previous version



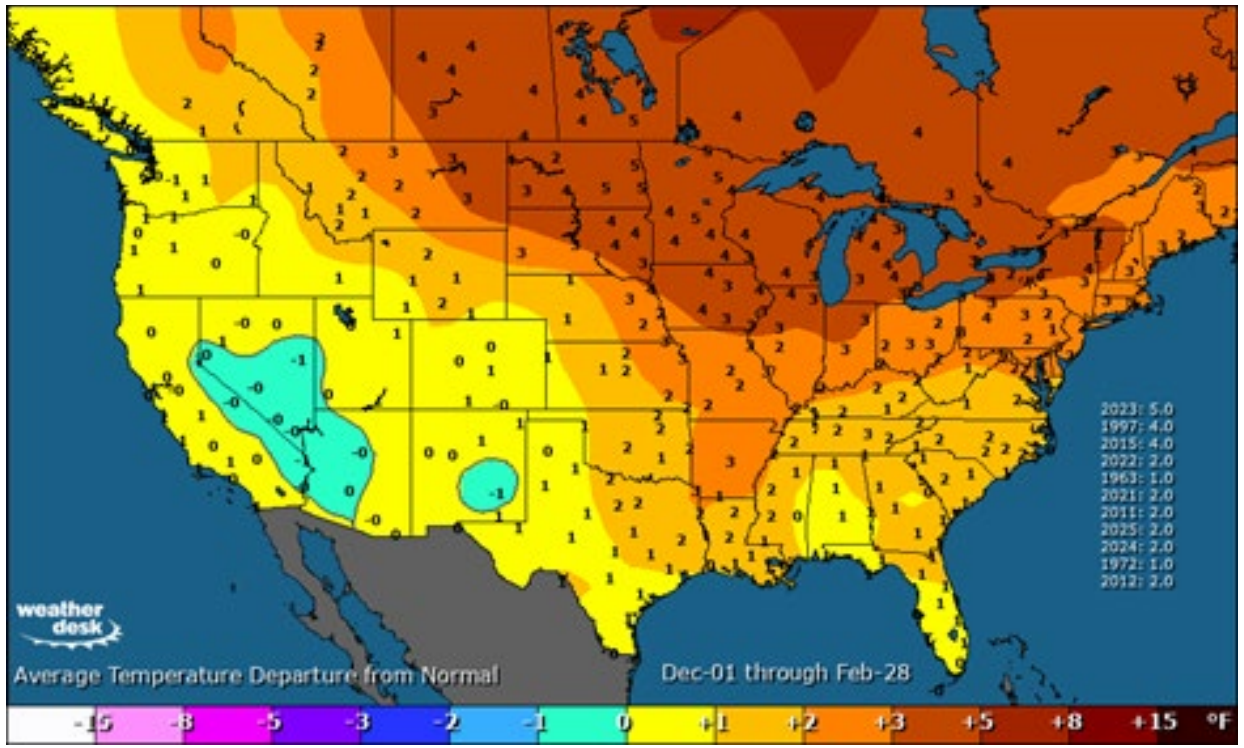
What was used to build the forecast?

- SST (Sea Surface Temperatures)
  - Oceans are the primary driver of weather patterns
- PDO and AMO cycles
  - Pacific Decadal Oscillation
  - Atlantic Multidecadal Oscillation
- ENSO (RONI)
  - El Niño, La Niña, or Neutral
- Recent temperature and precipitation trends (local and continental)
  - Drought or no drought
- Other climate trends
  - Lack of cold winters in recent yrs




Top 3 analogs (all El Niño events)

# Dallas-Fort Worth Extreme Temperature Potential




What was the **coldest** temperature at **DFW** in each of those winters?
*Note: the coldest lows don't always correlate to the coldest winters*

2023-24: 13° (Jan)

1997-98: 23° (Dec)
2015-16: 27° (Jan)

2022-23: 11° (Dec)
2021-22: 19° (Jan & Feb)
2011-12: 22° (Dec)
2025-26: 13° (Jan)
2024-25: 12° (Feb)
2012-13: 22° (Dec)

1972-73: 8° (Jan)
1963-64: 4° (Feb)

4° or colder has occurred in 12 past winters – but only twice (1989, 2021) since 1964

# Preliminary 2026-27 Winter Temperature Outlook

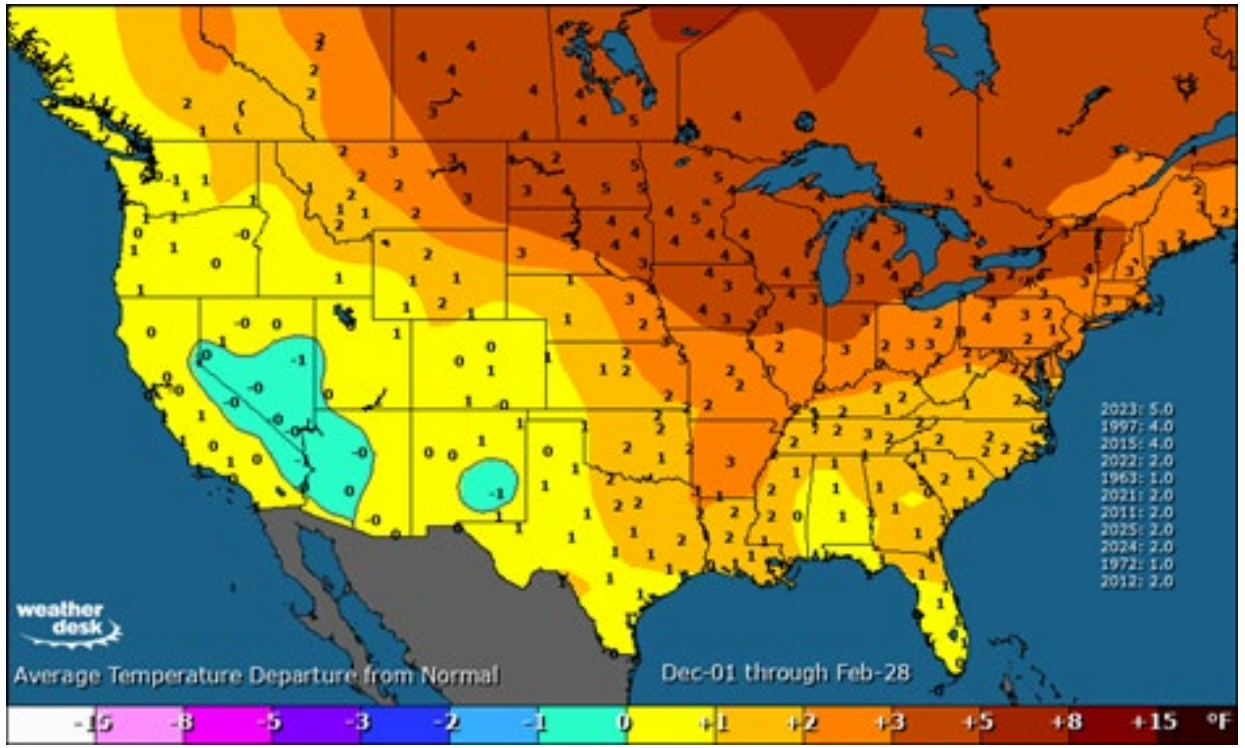
A cold winter has become uncommon this century

Only 3 of the past 25 winters have fallen in the coldest third of all historical winters (44 total since 1895)

The analog composite in addition to similar past ENSO events results in a slightly to moderately above normal forecast.

North and East Texas is most favored for above normal temperatures this coming winter

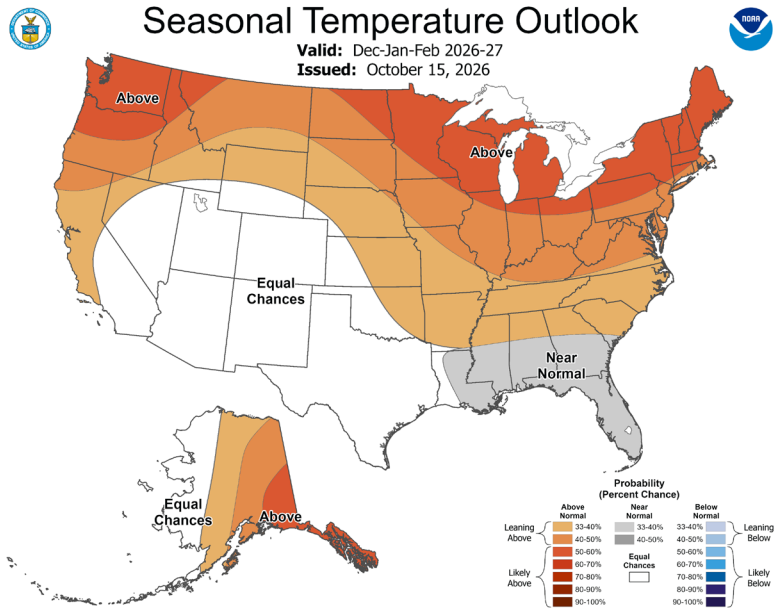
This is a seasonal Forecast, which is not designed to capture short-term cold extremes

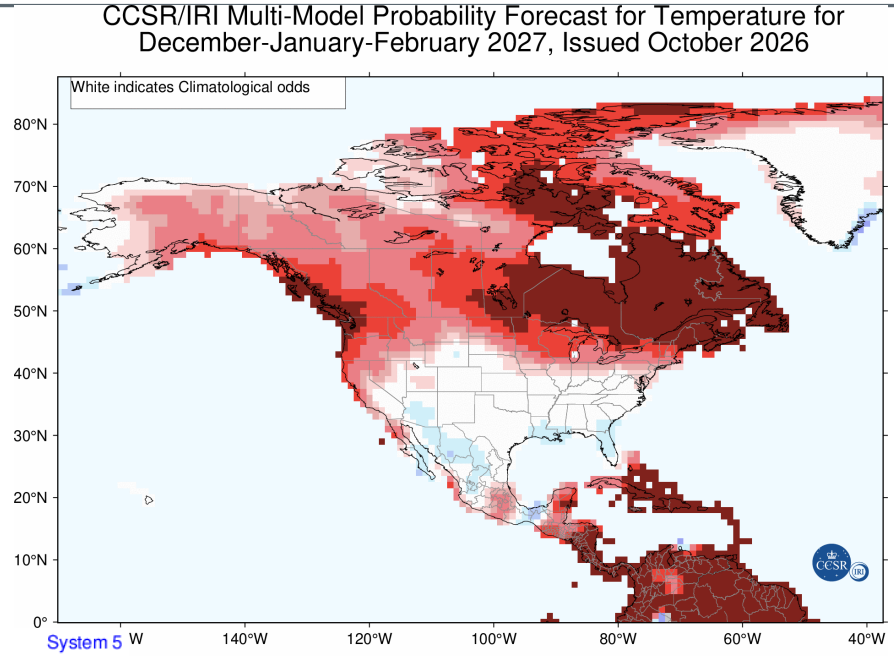


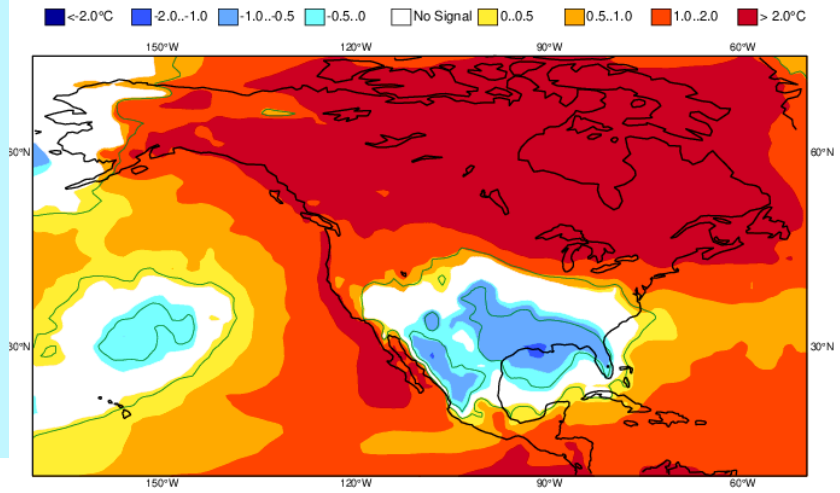

The previous preliminary forecast was not as warm, but was noted for the potential to trend warmer

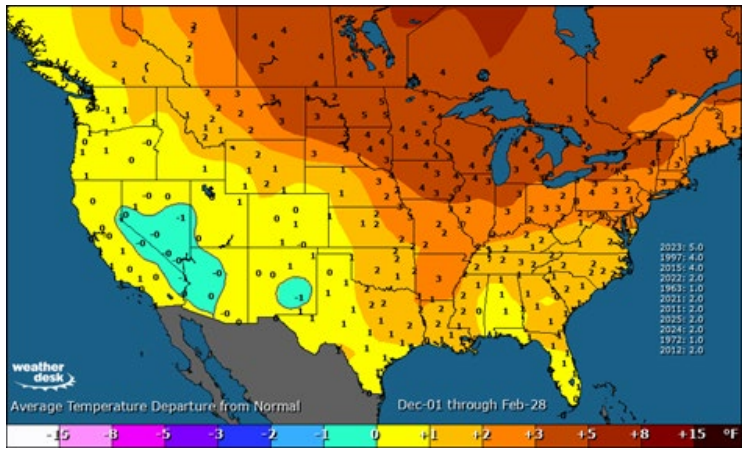


# Other Winter Forecasts




All forecasts show an El Niño Influence, which supports the northern tier of North America with the strongest above normal temperature potential

The southern tier tends to be wetter, which leads to a relatively cooler pattern (but not necessarily cold)



PUBLIC

ERCOT preliminary

# 2026-27 Winter Historical Matches (Analogs)

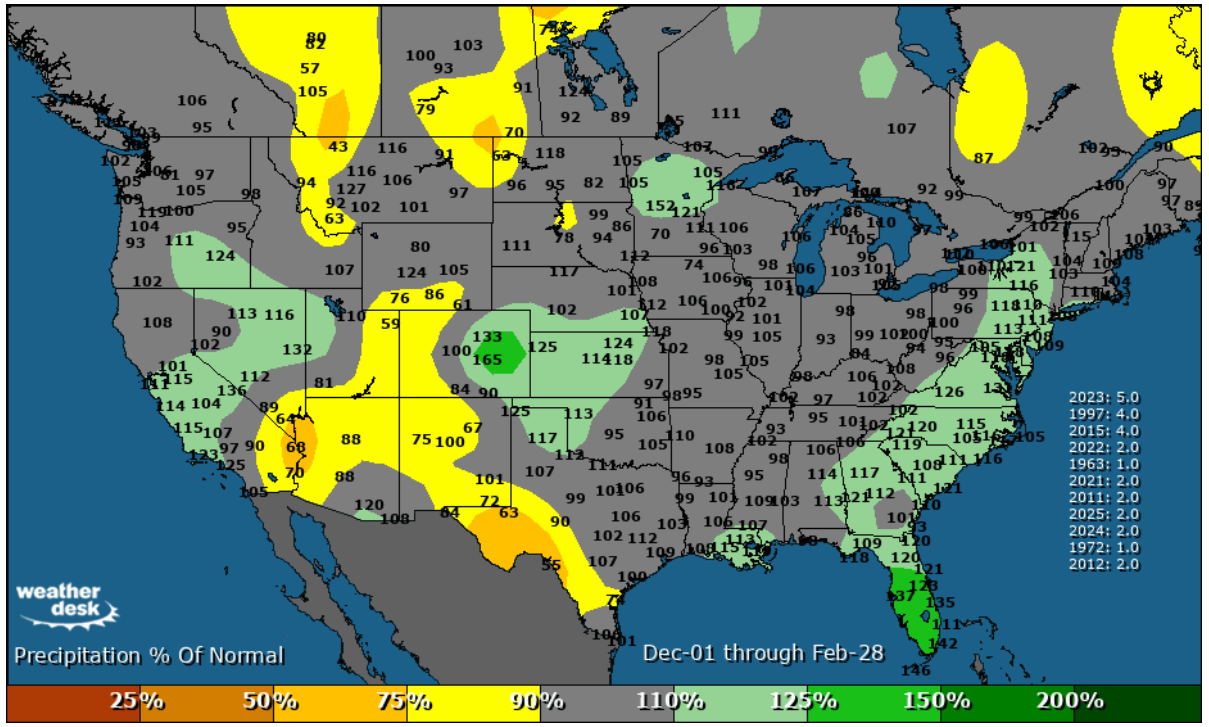
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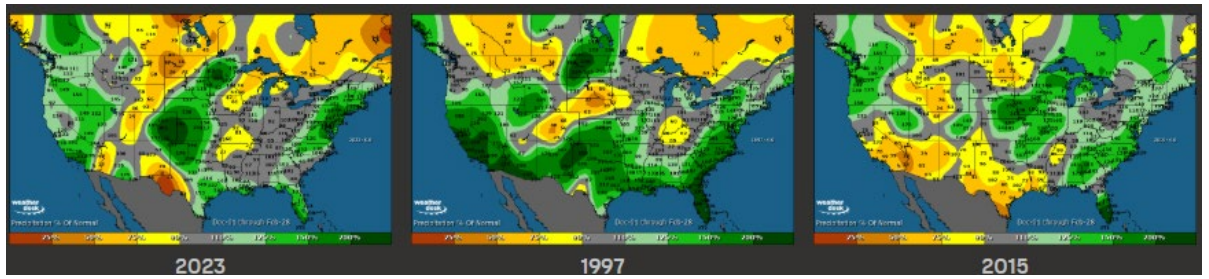
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3. 2015-16

4. 2022-23
5. 2021-22
6. 2011-12
7. 2025-26
8. 2024-25
9. 2012-13

10. 1972-73
11. 1963-64




Note: 2 of 3 were mostly wet. 2015-16 was an uncommon dry El Niño winter

**DFW** snow accumulations:

2023-24: 1.5”

1997-98: 0.5”
2015-16: trace

2022-23: 1.3”
2021-22: 1.7”
2011-12: 0.3”
2025-26: 2.4”
2024-25: 2.6”
2012-13: 0.8”

1972-73: 3.7”
1963-64: 15.3”

15-year normal: 1.6”

Good chance for accumulating snowfall this winter, but low chance for extreme amounts. 1 to 3 inches is a reasonable preliminary expectation

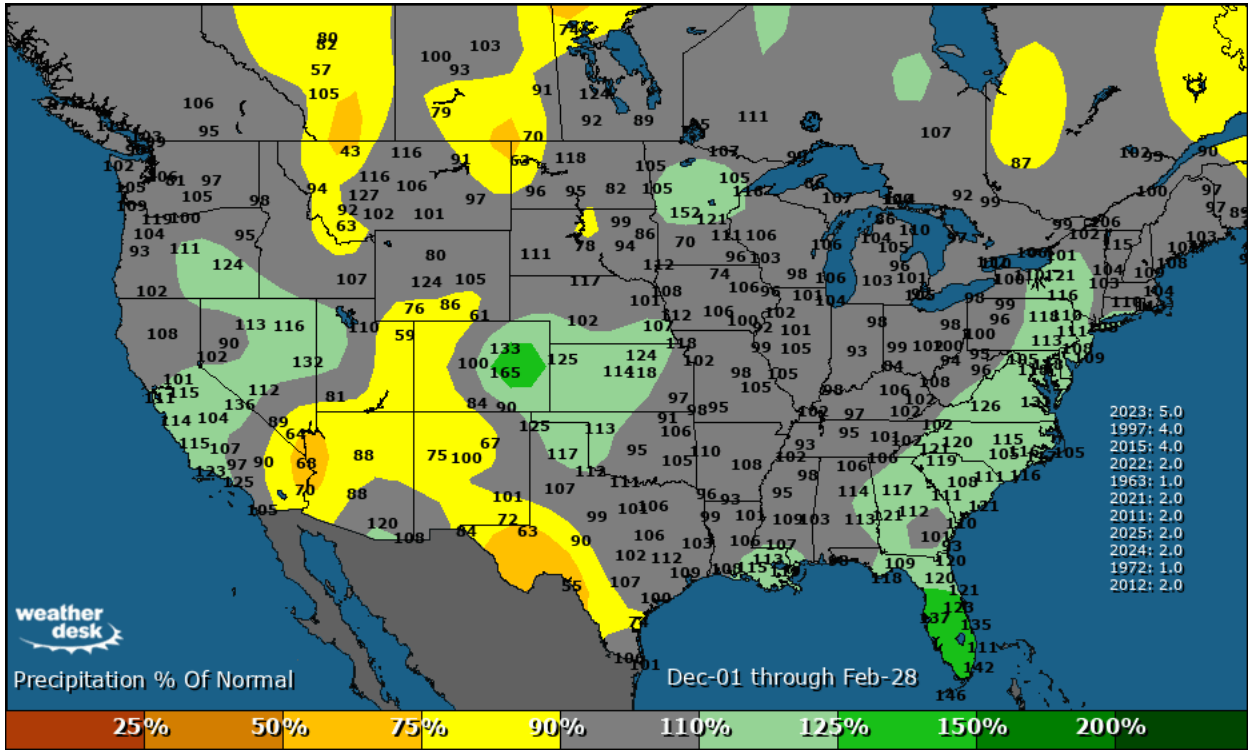
# Preliminary 2026-27 Winter Precipitation Outlook

The majority of Texas is predicted
To experience normal to above normal precipitation this winter

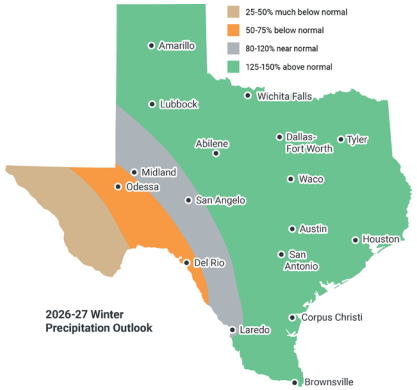
A relatively dry exception is forecasted for southern parts of Far West Texas

This forecast is similar to the 2023-24 winter and is very likely to be wetter than last winter

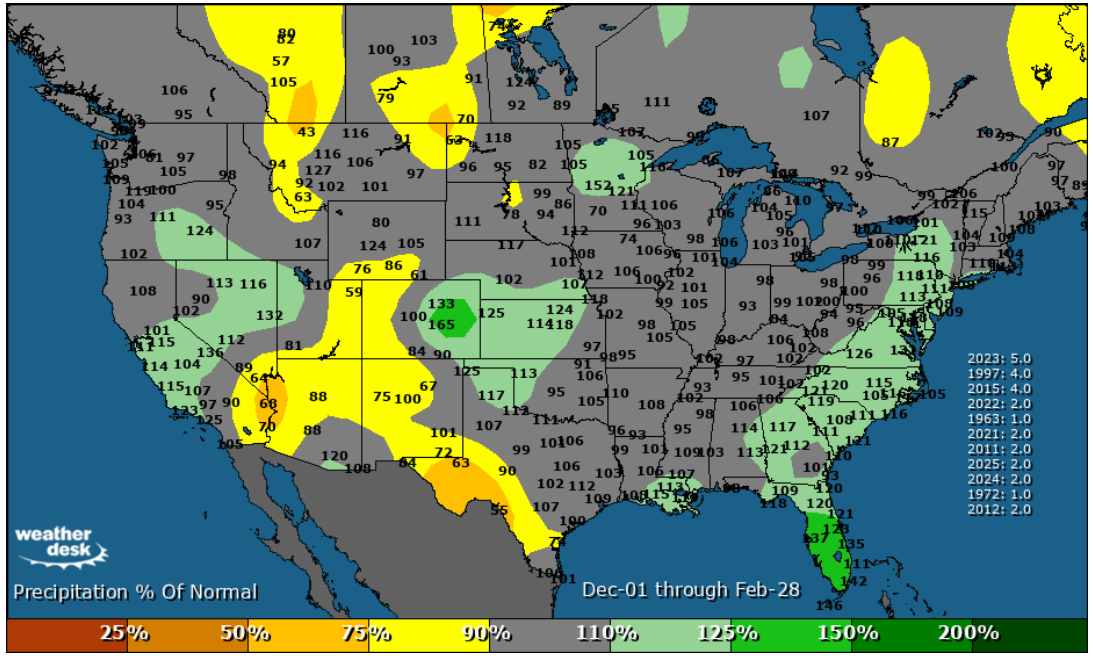
Higher forecast confidence than with temperatures

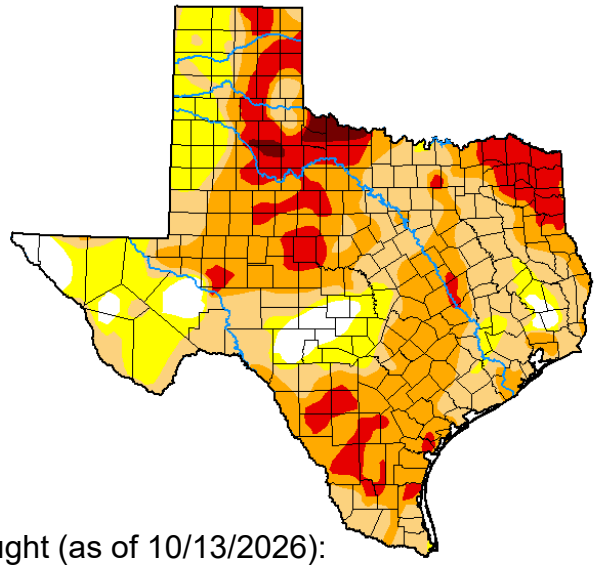



The previous preliminary forecast appears wetter than the analog-based forecast; however, the analogs do lean slightly wet. My final forecast will likely lean wetter (more in line with the previous forecast)



# 2026-27 Winter Precipitation Outlook vs Drought




Current Drought (as of 10/13/2026):
78% of the state's area in moderate drought or worse (two months ago, this was at 36%)

Drought conditions improved significantly over most of the state this spring and early-summer – before a much drier trend took hold for the late-summer period

This fall had a wet early-October for parts of the state, but a true wetter trend associated with El Niño has yet to take hold

That said, the recent trend toward worsening drought will likely be short-lived, with El Niño impacts expected to increase between November and February, favoring a wetter trend

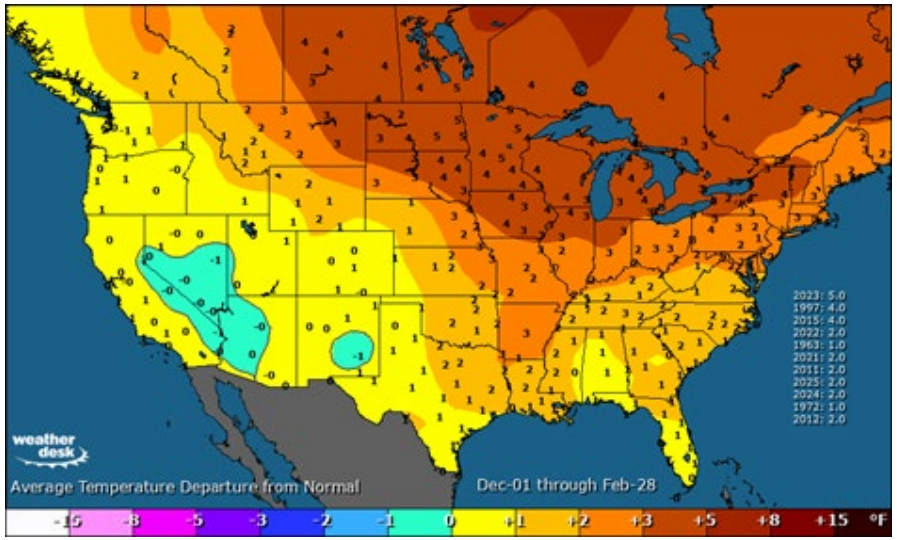
The drought picture should look much better 6 months from now

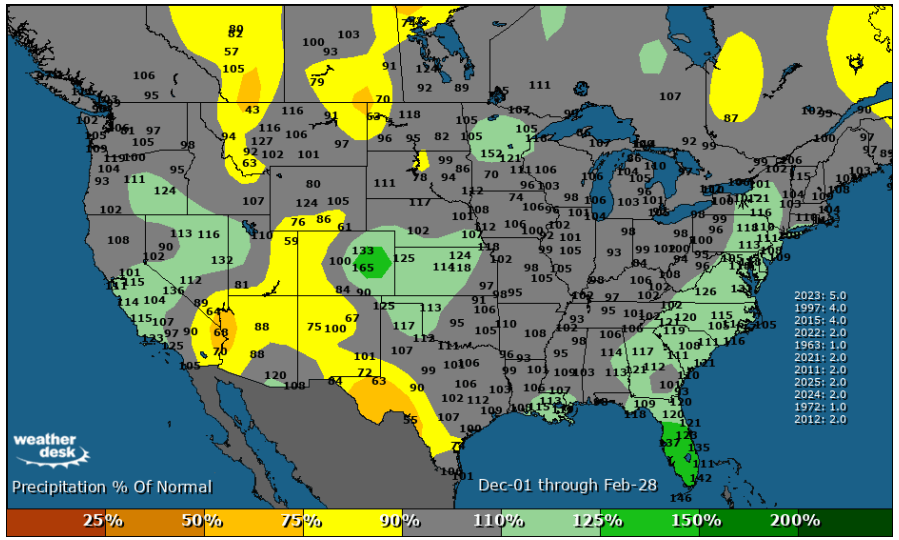
# Winter Weather Outlook Summary

- **The preliminary winter weather outlook calls for slightly to moderately above normal temperatures and normal to above normal precipitation (with some drier exceptions Far West)**
- **Limited historical comparison – though 2023-24 is – by far – the best match**
- **This winter will likely be cooler and wetter than last winter**
- **The big question: Will there be a period of extreme cold?**

  Based on recent trends, it would be wise to prepare for a period of extreme cold (but it's unlikely to dominate the winter)

  There are preliminary hints the polar vortex will again be a factor this winter, favoring the mid-to-late-winter period




**This forecast is preliminary. It will be finalized in November and be available on the ERCOT website**

https://www.ercot.com/gridmktinfo/dashboards/weatherforecast

## Weather Forecast Details

**General Discussion:**
Most of the ERCOT region will continue to see highs in the mid-80s to low-90s over the next seven days; however, cooler temperatures on Saturday. This will be felt mostly in North and West Texas. And a cooler scenario for most this period will be brief as temperatures will return warmer Sunday and into early next week. Beginning next Wedn There's still quite a bit of disagreement among the computer models, however, so more time is needed to determi

**Today:**
Scattered to isolated showers and thunderstorms will again impact the Panhandle and portions of the Far West z thunderstorms will spread into the Rio Grande Valley late tonight, mostly after midnight. The rest of the state will r large metropolitan areas should top out around 90 this afternoon. High will near 90 in Abilene as well . Low-90s w range from the mid-70s north to the mid-80s south.

**Tomorrow:**
A cold front will move into North and West Texas during the day on Friday. This will result in those regions being c today. 91 in Houston tomorrow afternoon. The Rio Grande Valley will see more clouds and scattered rain opportu

7-Day Temperature Forecast by City
Low and high temperatures forecast for the next seven days for major cities within the ERCOT system.

Forecast Variability Report
ERCOT's assessment of the potential for load, wind, and solar conditions to vary between forecasts and actuals.

Weather Seasonal Updates
A seasonal forecast for the ERCOT region.

# Questions?

