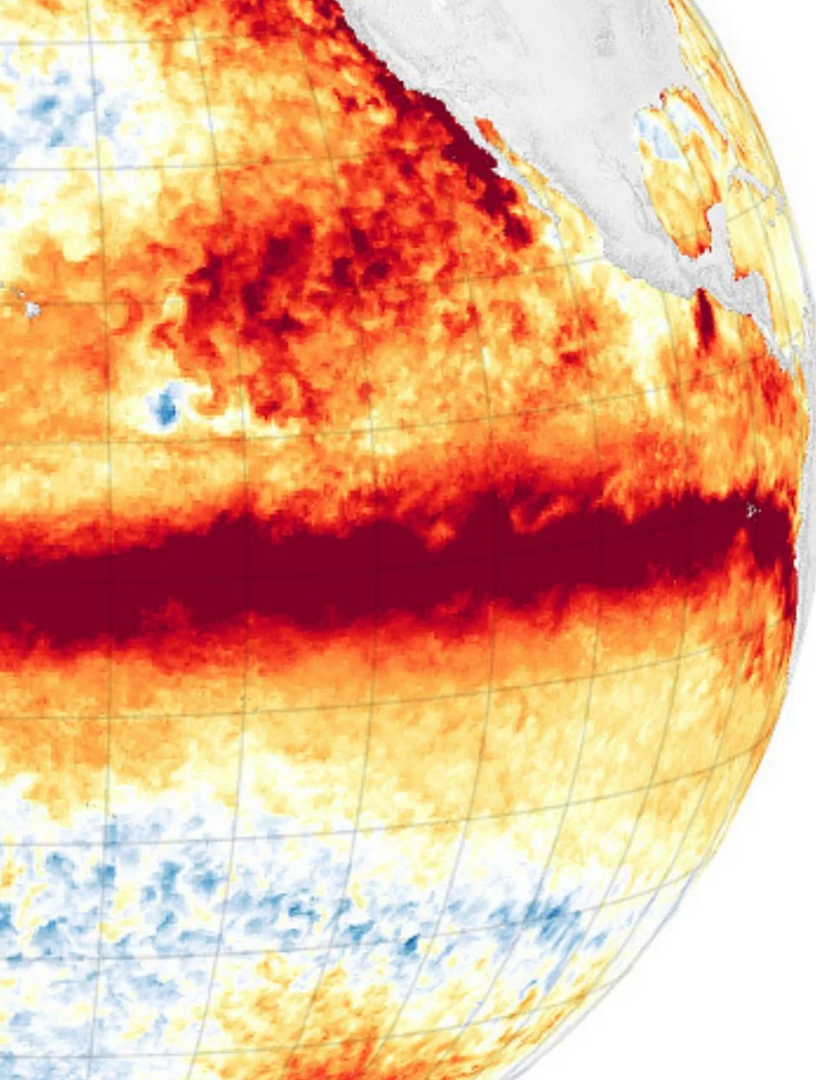


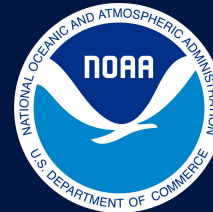


2026-27 Winter Outlook

The El Niño Winter

Michael Griesinger

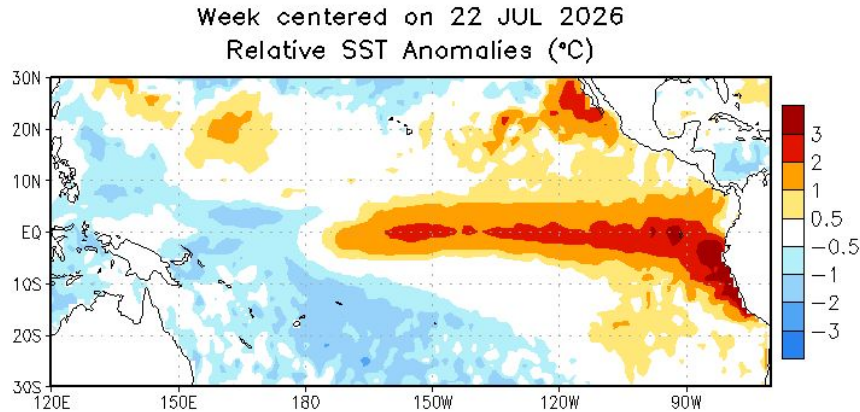
National Weather Service Twin Cities



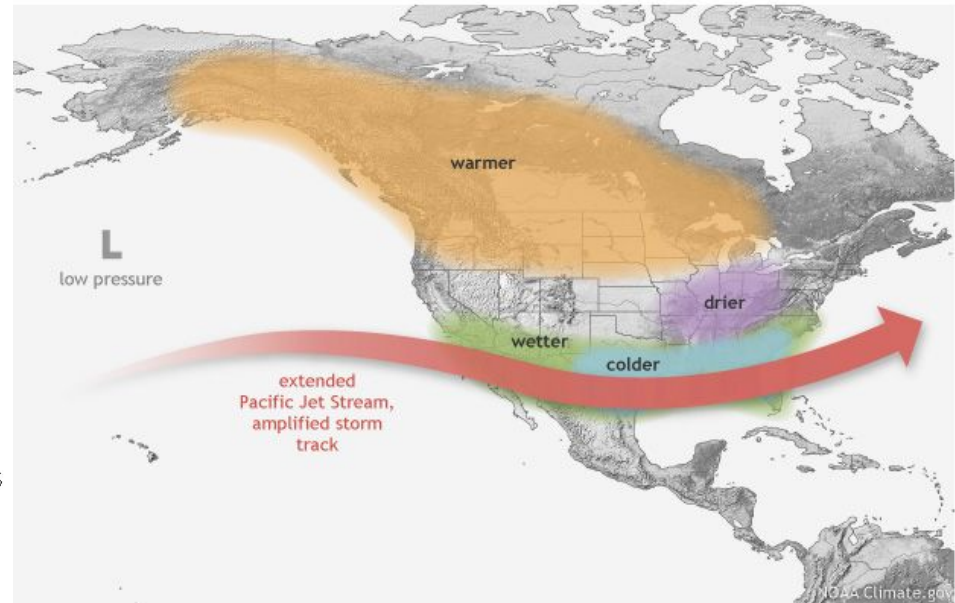
U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service

El Niño

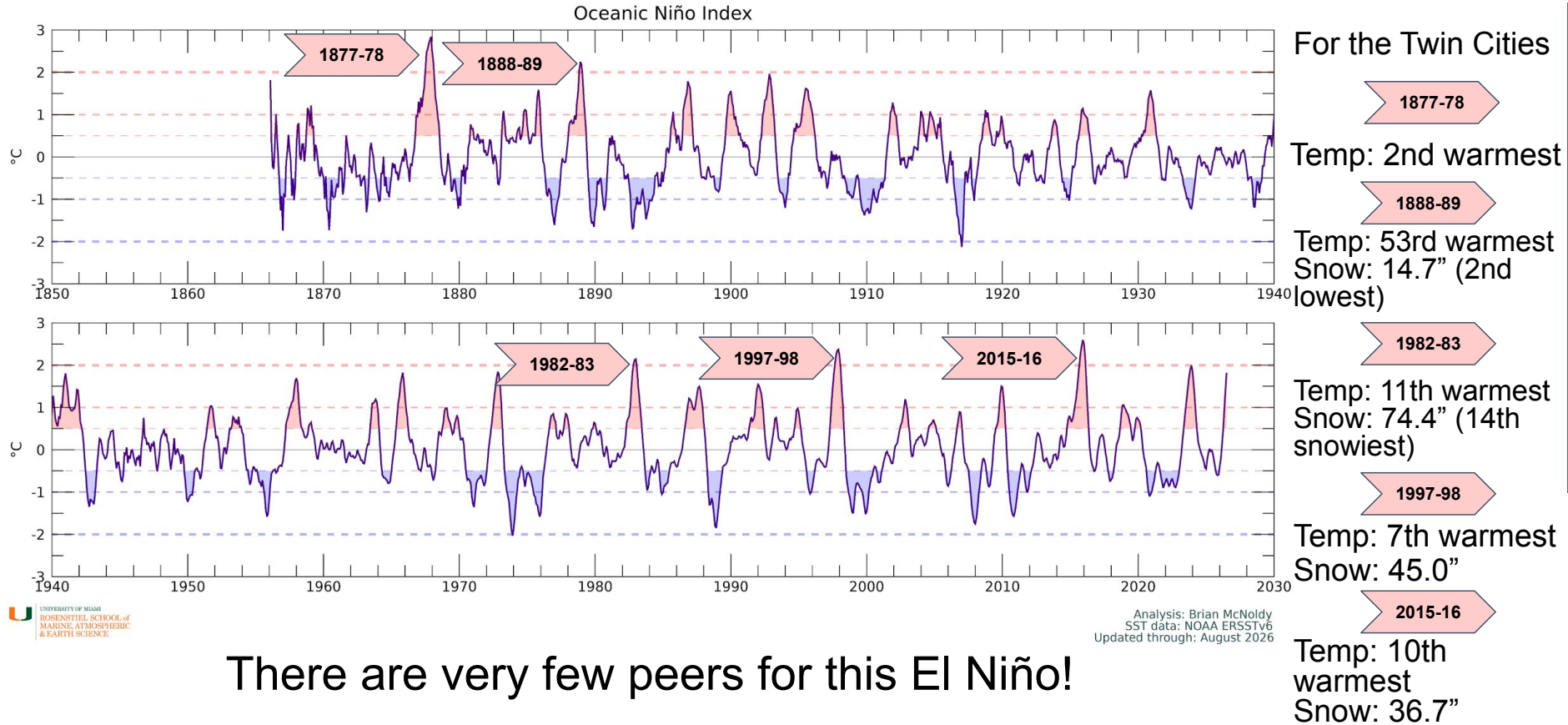
- It is strong
- Both the atmosphere and ocean are locked into a classic El Niño pattern
- This will be THE DOMINANT INFLUENCE on weather patterns into next Spring
- Look for highly anomalous amounts of moisture for weather systems to consume



WINTER EL NIÑO PATTERN

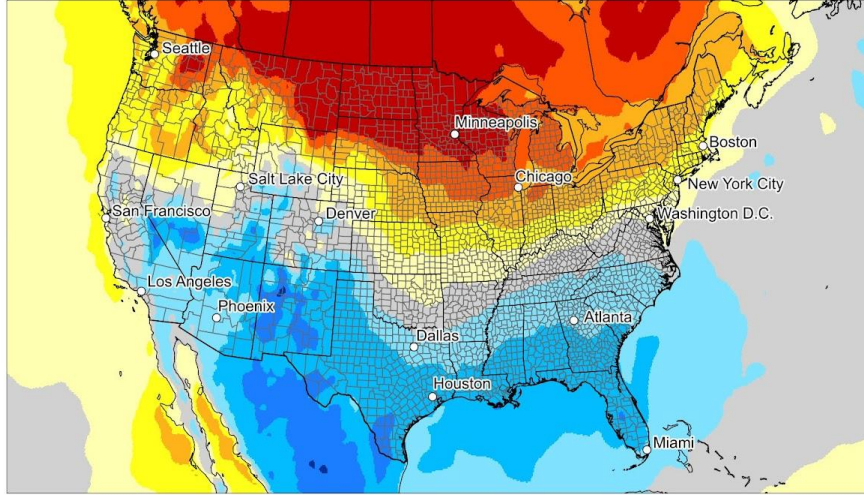


Putting this El Niño into Historical Perspective



Impact of El Niño on Winter

Temperature Departure for Dec-Feb (Str/Very Str Ninos)

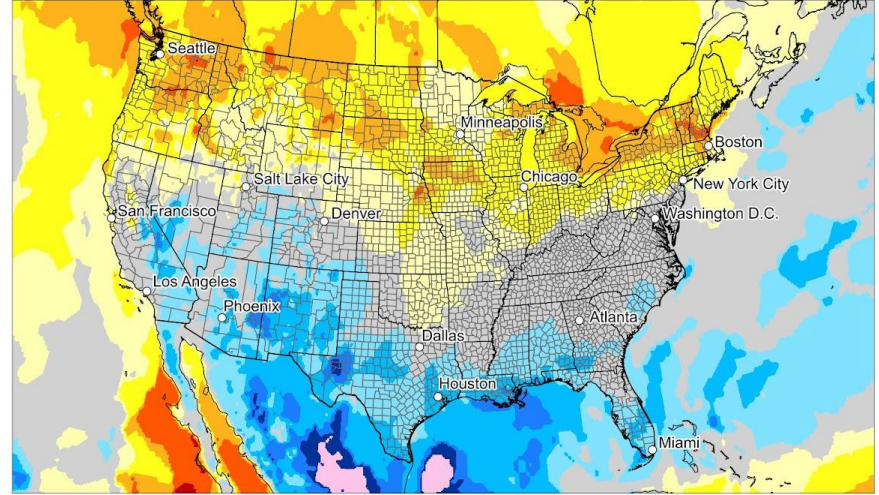


Years: 1958, 1966, 1973, 1983, 1988, 1992, 1998, 2003, 2010, 2016, 2024

-2.7F -2.1F -1.5F -0.9F -0.3F 0.3F 0.9F 1.5F 2.1F 2.7F

Departure From (Detrended) Average (F) Since 1950

Temperature Count for Dec-Feb (Str/Very Str Ninos)



Years: 1958, 1966, 1973, 1983, 1988, 1992, 1998, 2003, 2010, 2016, 2024

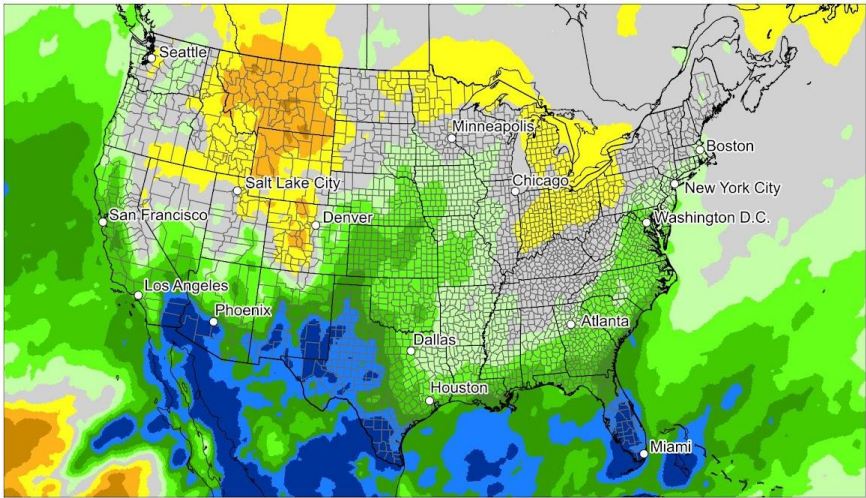
0 1 2 3 4 5-6 7 8 9 10 11

Count of Dec-Feb Periods $\geq +0.0F$ of Detrended Average (Since 1950)

It is the fewer pushes of arctic air that drive the warm temperature anomalies!

Impact of El Niño on Winter

Precipitation Departure for Dec-Feb (Str/Very Str Ninos)

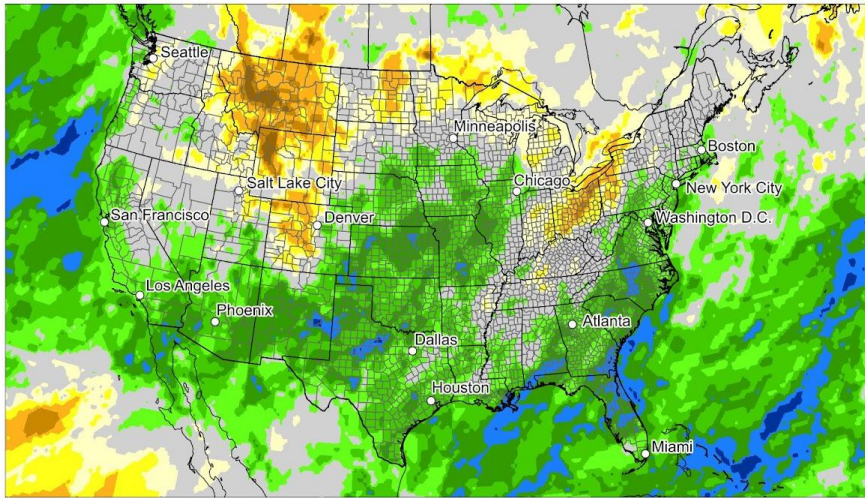


Source: ERA5 Reanalysis Composite of 11 years since 1950. Map by: Brian Brettschneider
Years: 1958, 1966, 1973, 1983, 1988, 1992, 1998, 2003, 2010, 2016, 2024

50% 75% 85% 95% 105% 115% 125% 135% 145% 155%

Percent of (Detrended) Average(Since 1950)

Precipitation Count for Dec-Feb (Str/Very Str Ninos)



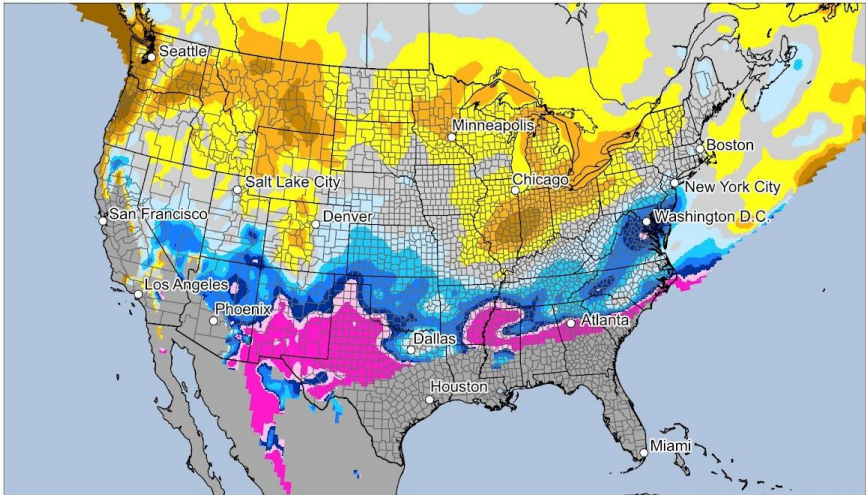
Source: ERA5 Reanalysis Composite of 11 years since 1950. Map by: Brian Brettschneider
Years: 1958, 1966, 1973, 1983, 1988, 1992, 1998, 2003, 2010, 2016, 2024

0 1 2 3 4 5-6 7 8 9 10 11

Count of Dec-Feb Periods $\geq +100.0\%$ from Detrended Average (Since 1950)

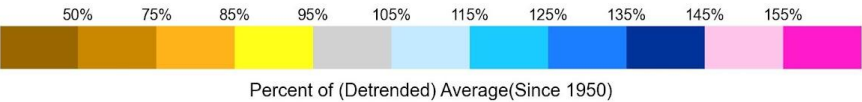
Impact of El Niño on Winter

Snowfall Departure for Dec-Feb (Str/Very Str Ninos)

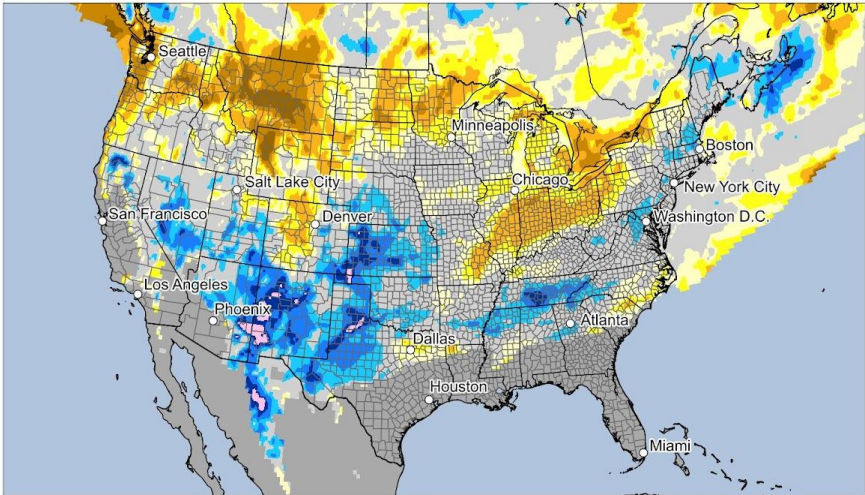


Source: ERA5 Reanalysis Composite of 11 years since 1950. Map by: Brian Brettschneider

Years: 1958, 1966, 1973, 1983, 1988, 1992, 1998, 2003, 2010, 2016, 2024

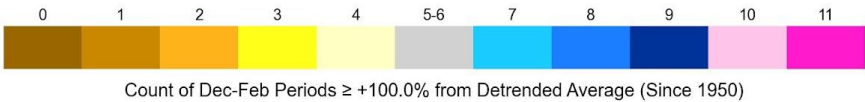


Snowfall Count for Dec-Feb (Str/Very Str Ninos)



Source: ERA5 Reanalysis Composite of 11 years since 1950. Map by: Brian Brettschneider

Years: 1958, 1966, 1973, 1983, 1988, 1992, 1998, 2003, 2010, 2016, 2024



It can still snow (a lot) with an El Niño

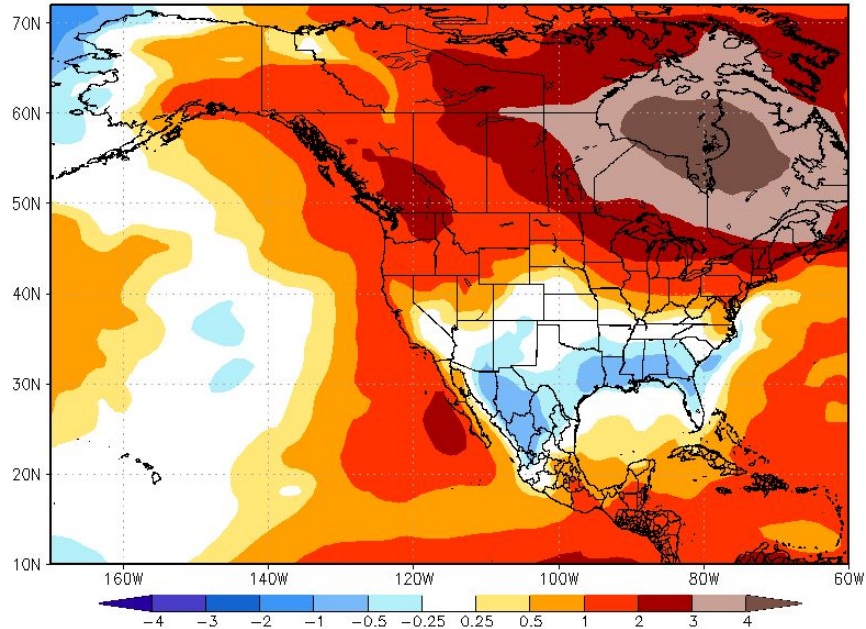
Top Snowfalls for Twin Cities

1.	28.4 inches:	1991 October 31 - November 3 (Halloween Blizzard)	
2.	21.1 inches:	1985 November 29 - December 1 (Thanksgiving Weekend)	
3.	20.0 inches:	1982 January 22 - 23	
4.	17.4 inches:	1982 January 20 - 21	
5.	17.1 inches:	2010 December 10 - 11 (Final "Domebuster")	
6.	16.8 inches:	1940 November 11 - 13 (Armistice Day)	
7.	16.7 inches:	1985 March 3 - 4	
7.	16.7 inches:	1940 March 11 - 14 (tie)	
9.	16.5 inches:	1982 December 27 - 28	strong El Niño
10.	16.0 inches:	1917 January 20 - 21	
10.	16.0 inches:	1999 March 8 - 9 (tie)	
12.	15.8 inches:	2018 April 13-16 (Thunder Blizzard)	
13.	15.3 inches:	1886 November 16-18	
14.	15.1 inches:	2023 January 2-5 (Big Mess)	
15.	14.7 inches:	1985 March 31	
16.	14.3 inches:	1991 November 29 - 30 (Black Friday)	
17.	14.1 inches:	1952 March 22 -23 (tie)	
17.	14.1 inches:	1983 November 27 - December 1 (tie)	
19.	14.0 inches:	1899 March 10-12	
20.	13.8 inches:	2011 February 20-21	
21.	13.6 inches:	1966 March 22-23 (tie)	
21.	13.6 inches:	1983 April 14 (tie)	strong El Niño
23.	13.4 inches:	2023 February 21-23	
24.	13.1 inches:	1983 December 13-15	
25.	13.0 inches:	1907 April 27-28	

- Highlighted snow storms occurred during an El Niño (any strength) winter
 - 8 of the top 25!
- Although it may snow less overall, we can still get “the big one” with an El Niño!

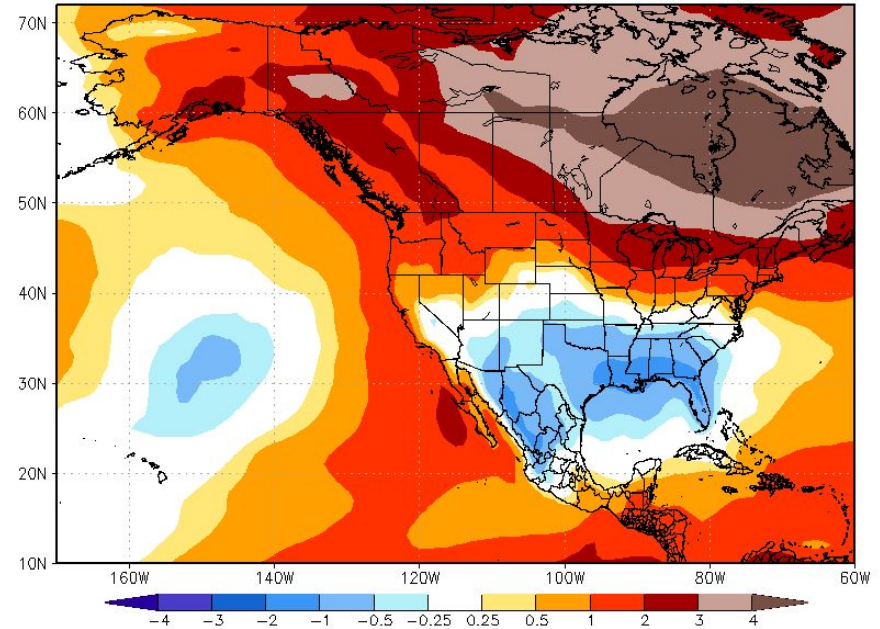
DJF Outlooks (Ensemble Model mean)

NMME Forecast of TMP2m Anom IC=202610 for Lead 2 2026DJF



NMME

IMME Forecast of TMP2m Anom IC=202610 for 2026DJF



IMME

DJF Outlooks (WPC-EPD)

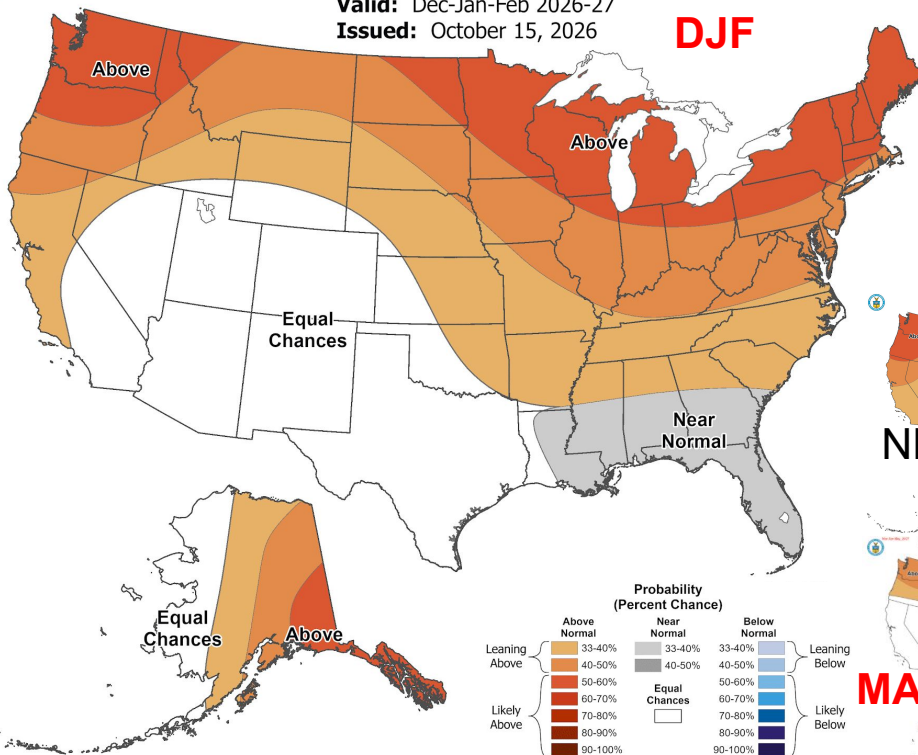


Seasonal Temperature Outlook

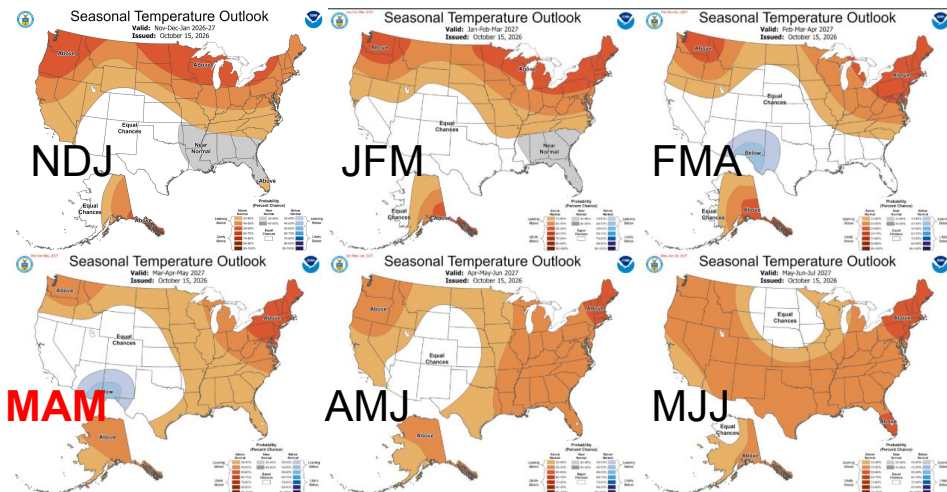
Valid: Dec-Jan-Feb 2026-27

Issued: October 15, 2026

DJF

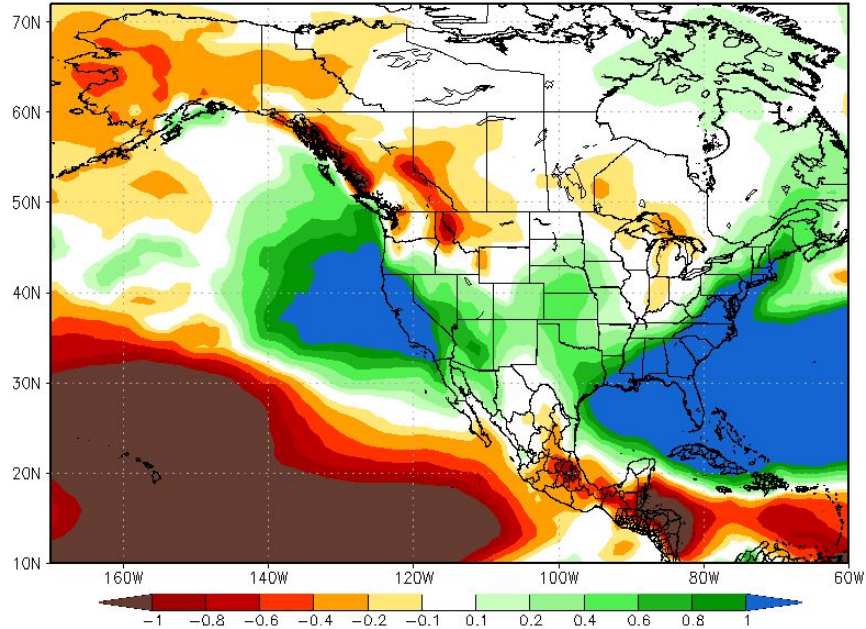


- El Niño!
- Suppressed northern stream leads to fewer Arctic outbreaks across Canada and the northern CONUS
- Anomalous warmth slowly recedes through the Spring



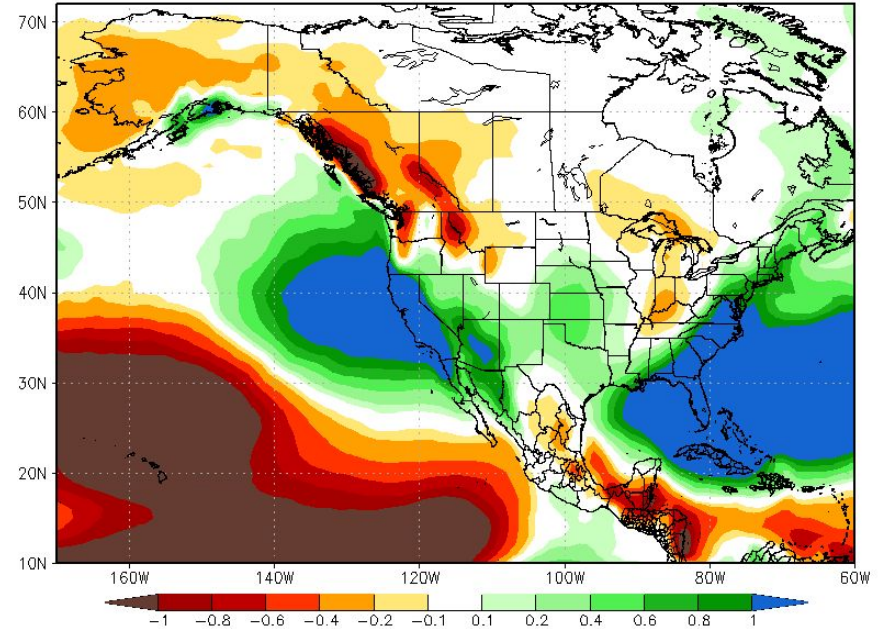
DJF Outlooks (Ensemble Model mean)

NMME Forecast of Prec. rate Anom IC=202610 for Lead 3 2027JFM



NMME

IMME Forecast of Prec. rate Anom IC=202610 for 2027JFM



IMME

DJF Outlooks (WPC-EPD)

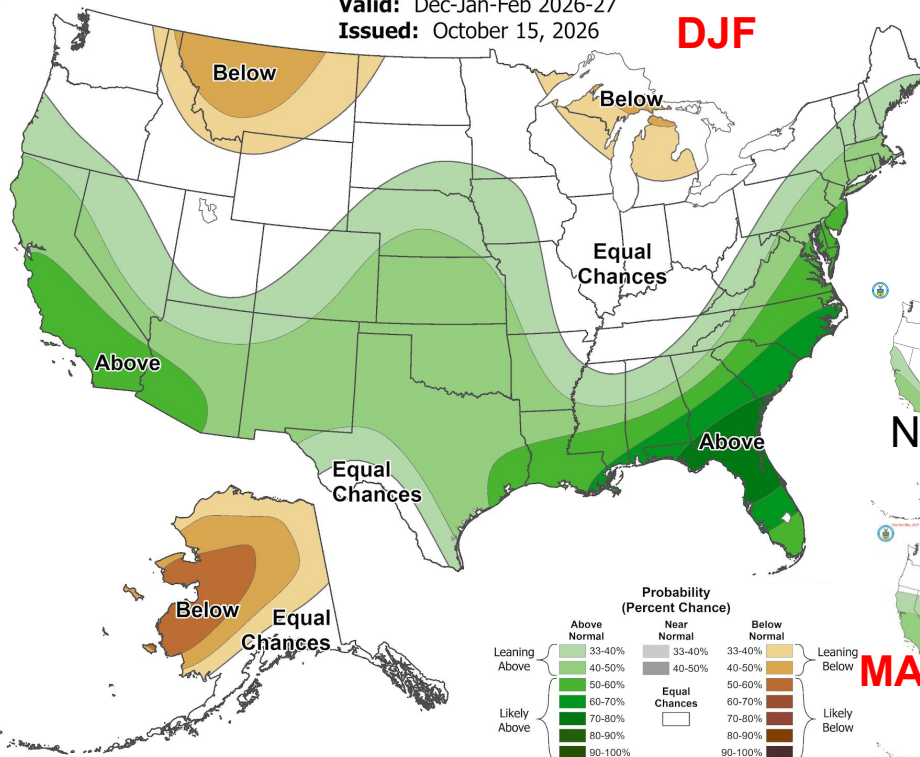


Seasonal Precipitation Outlook

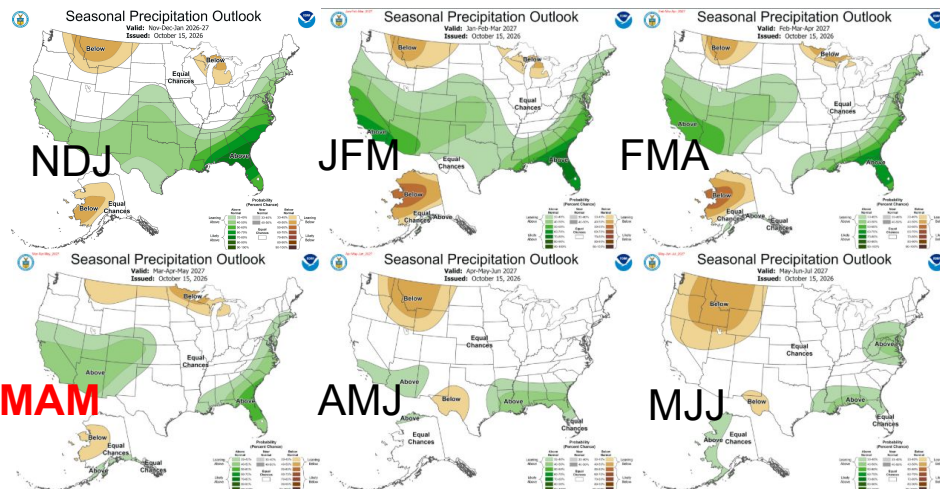
Valid: Dec-Jan-Feb 2026-27

Issued: October 15, 2026

DJF



- More uncertainty with precipitation outlooks
- Given expected warmth and potential for mostly rain events, it is very plausible that we see above normal precipitation with below normal snowfall.
- Uncertainty in precipitation continues into the Spring



Final Thoughts

- High confidence in above normal temperatures this cool season
 - Top 5 warmest winter not an unreasonable expectation
- Get ready for a lot of p-types this winter
- Numerous freeze/thaw cycles
- If we get above normal snowfall, it means we get 2 or 3 big (10+”) snowfall events
- For winter recreation:
 - Expect thinner lake ice than normal
 - Variable snow cover

