2018 Agricultural Climate Outlook

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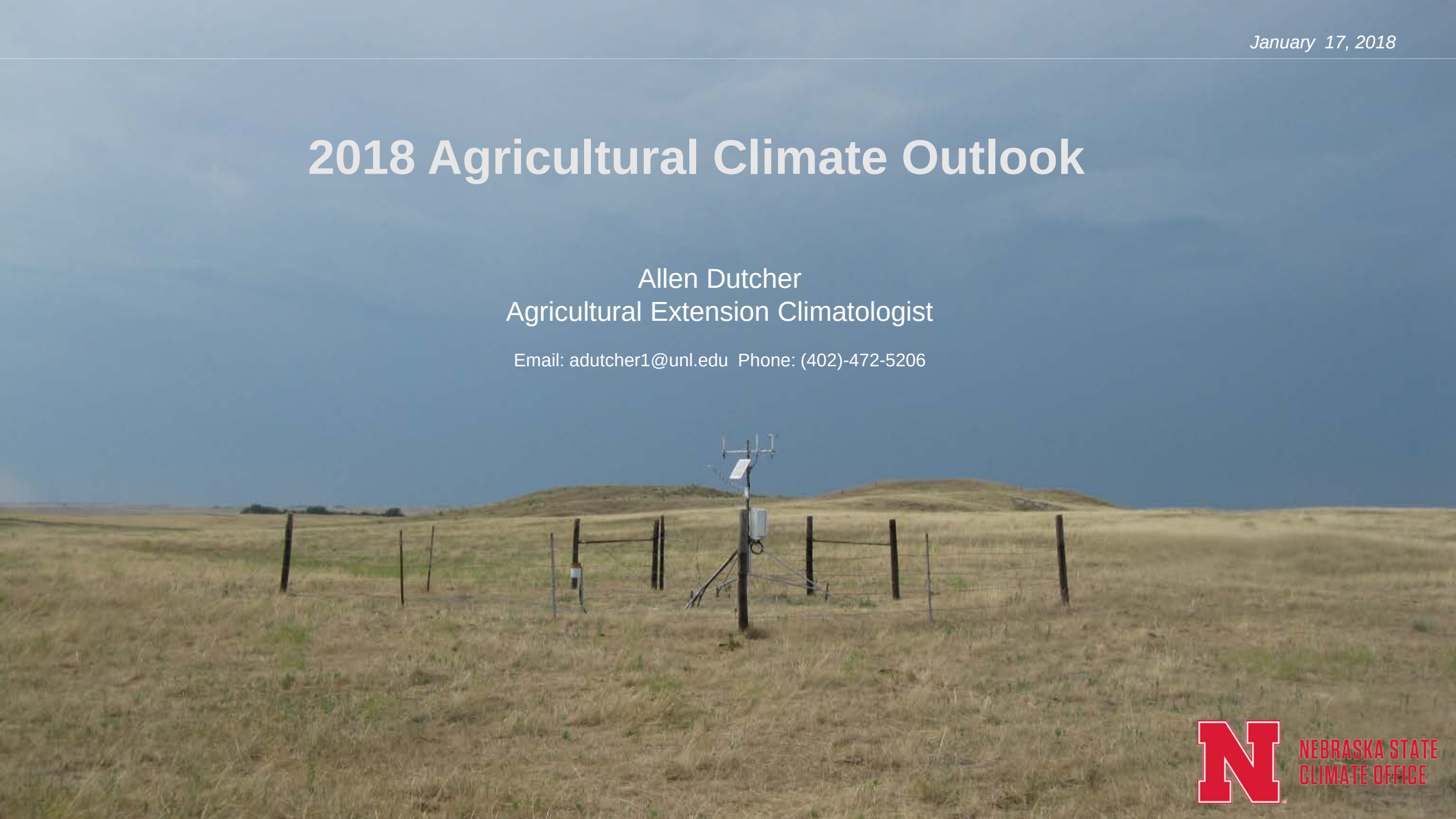
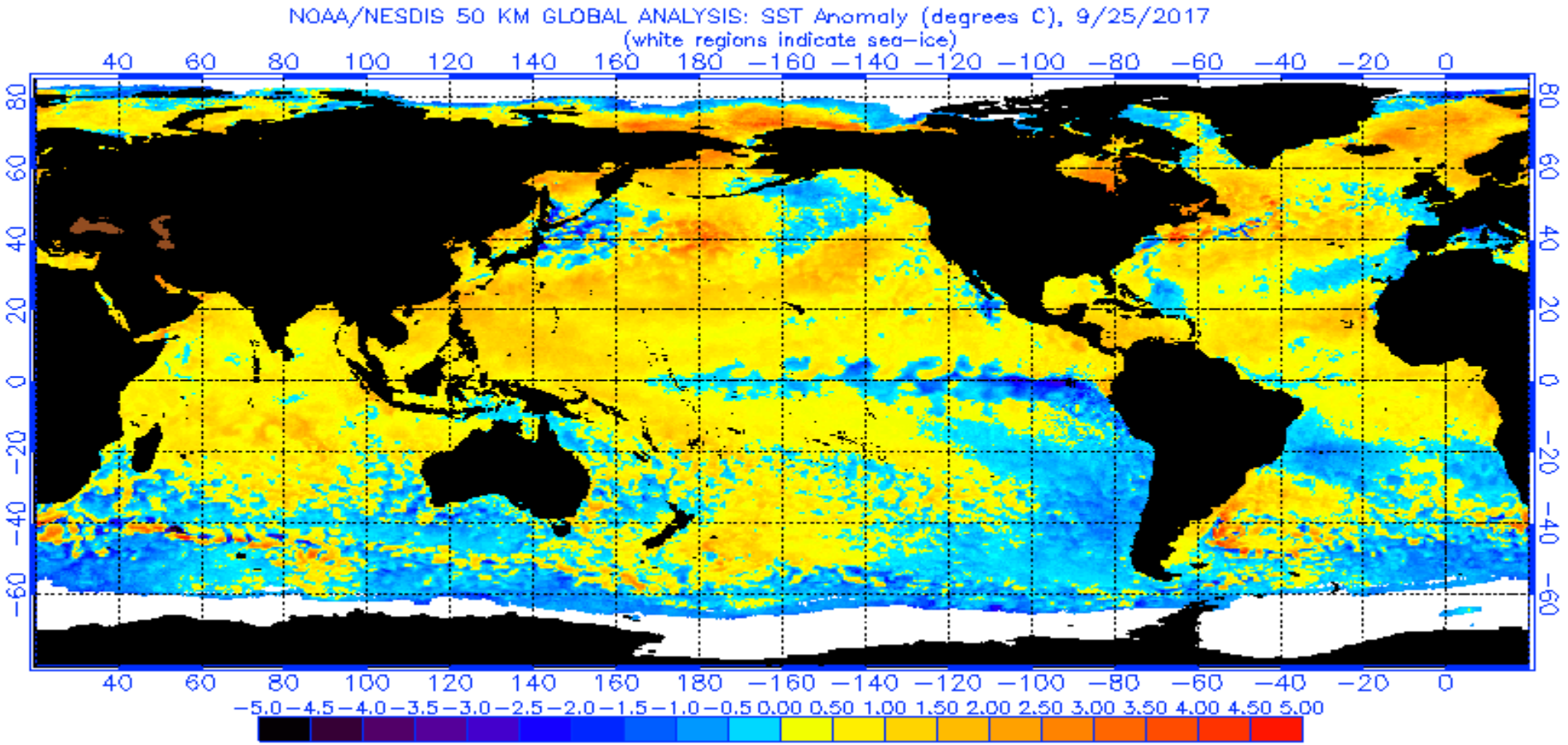
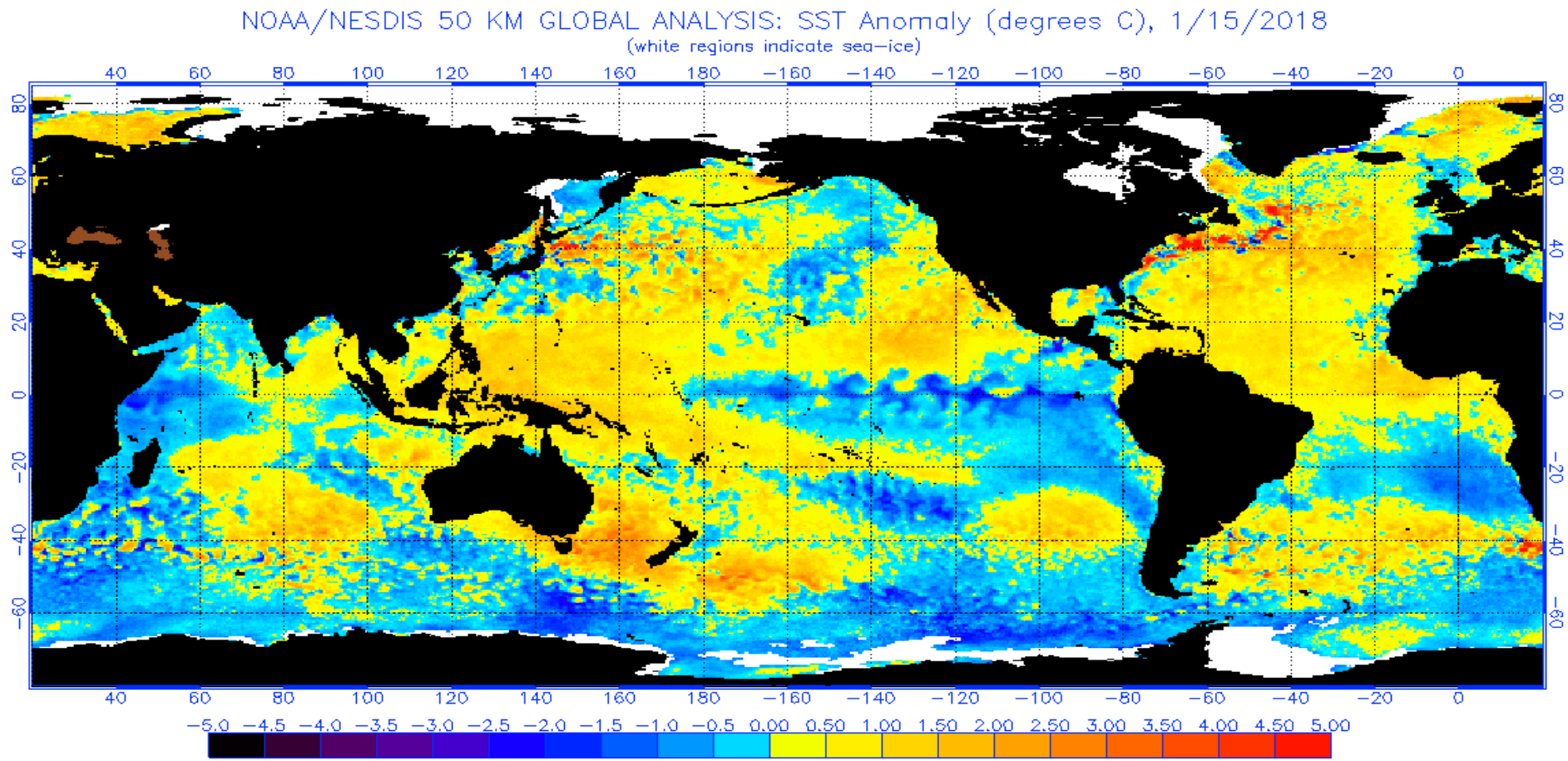


NEBRASKA STATE CLIMATE OFFICE

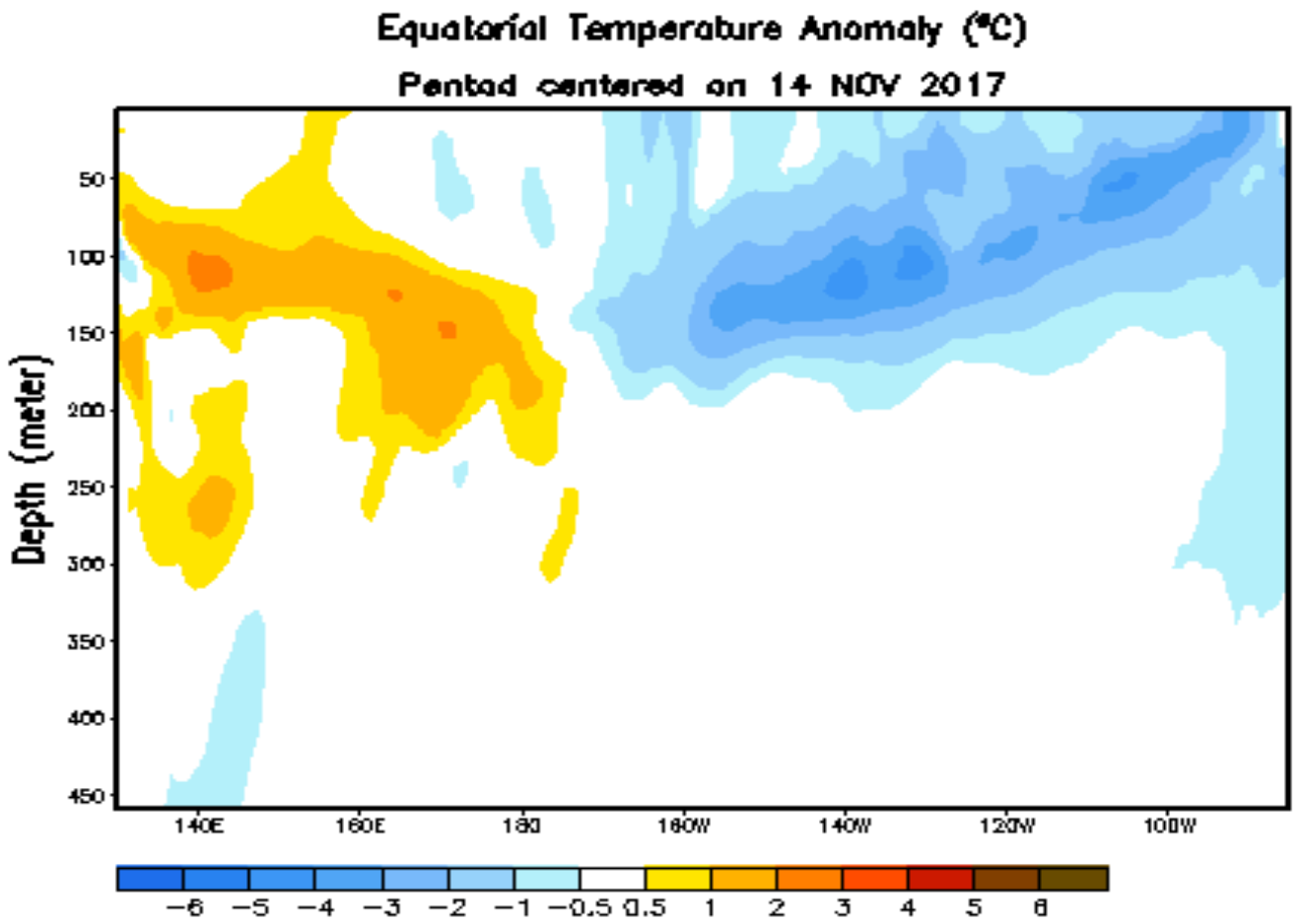
Four Month Global SST Anomalies



Current Global SST Anomalies



Sub-Surface Equatorial SST Trend



ENSO Forecast: Consensus of Global Models

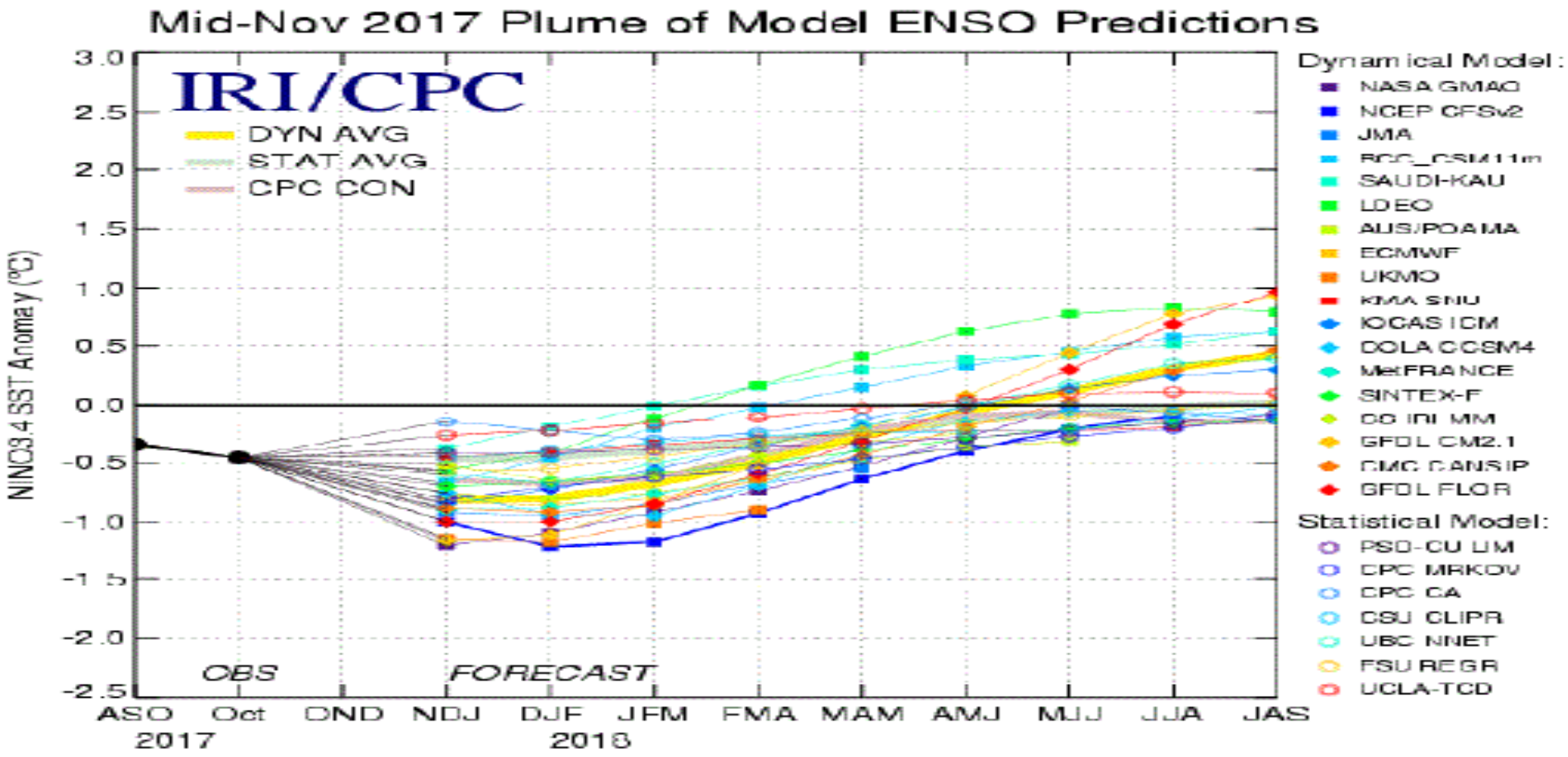
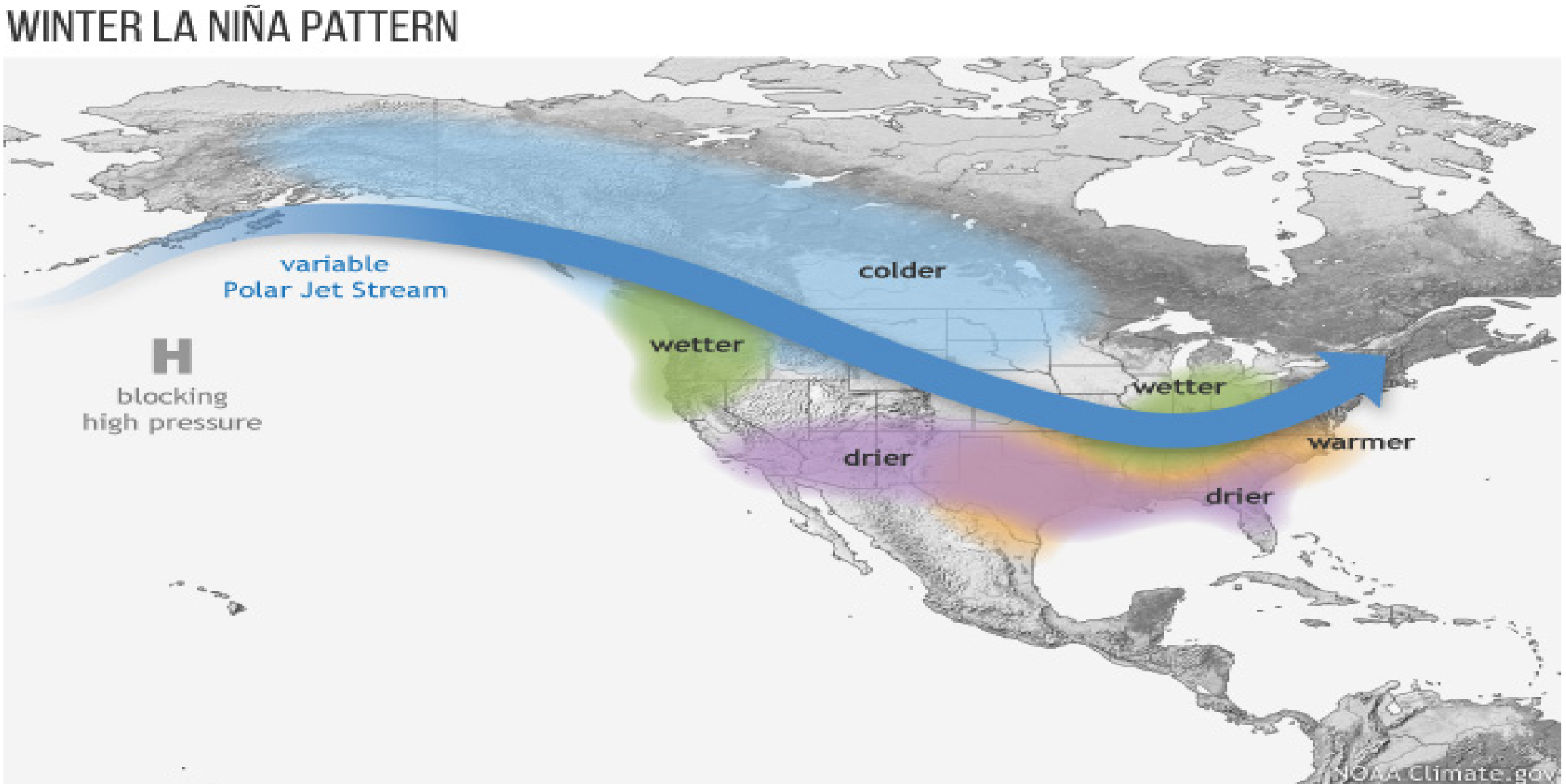
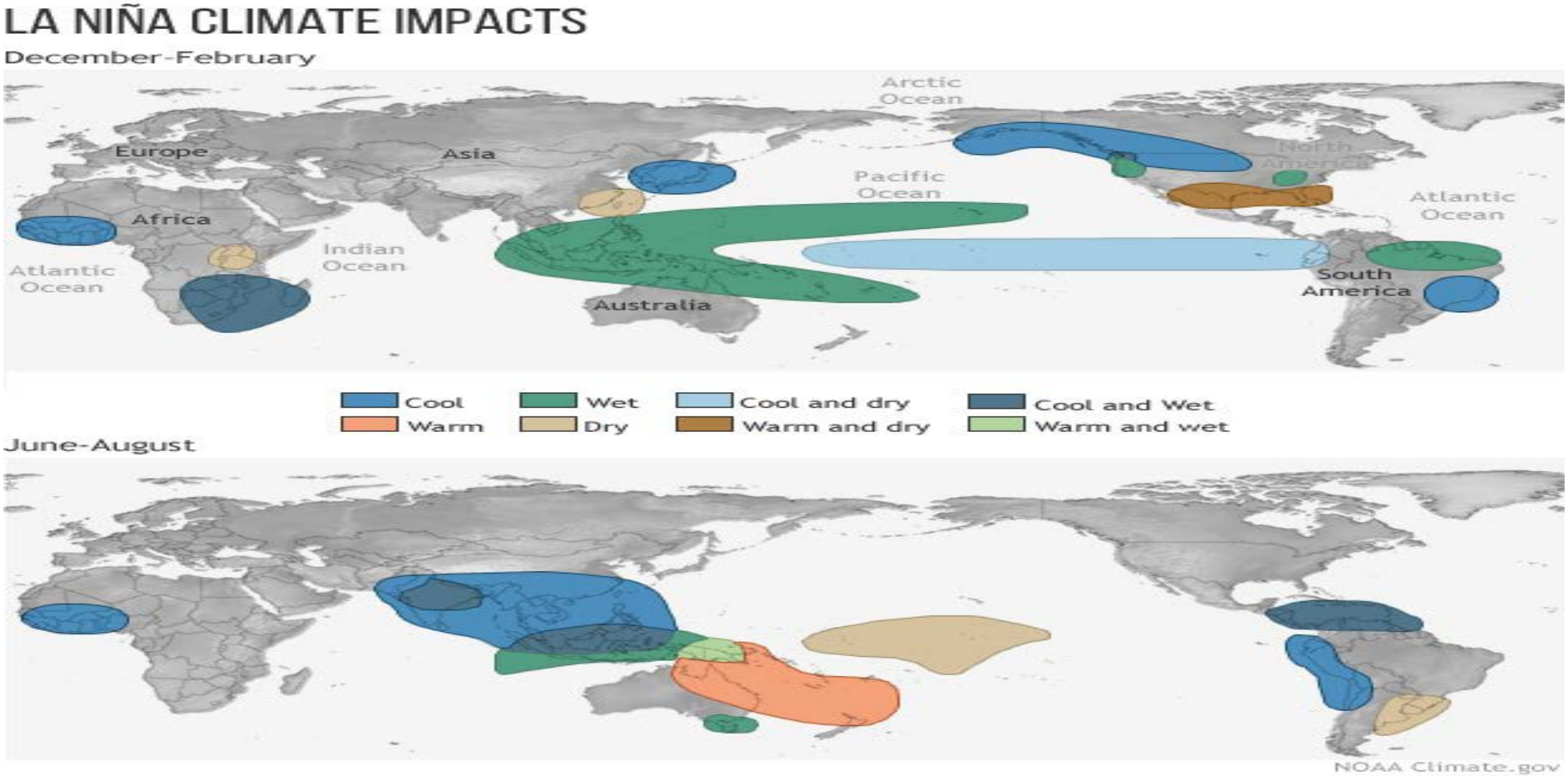


Figure 6. Forecasts of sea surface temperature (SST) anomalies for the Niño 3.4 region (5°N-5°S, 120°W-170°W). Figure updated 17 November 2017.

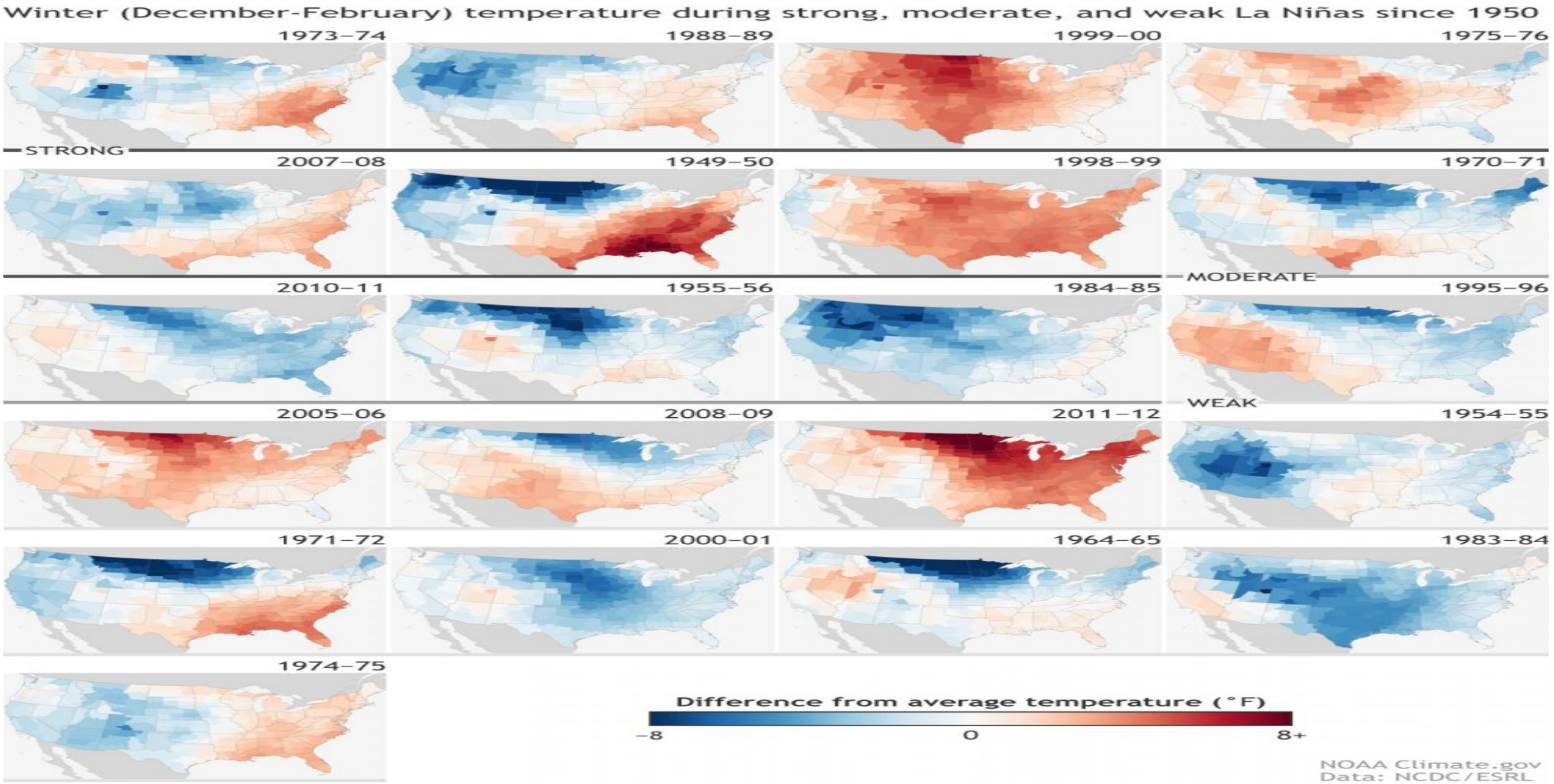
Mean La Nina Winter Jet Stream Pattern



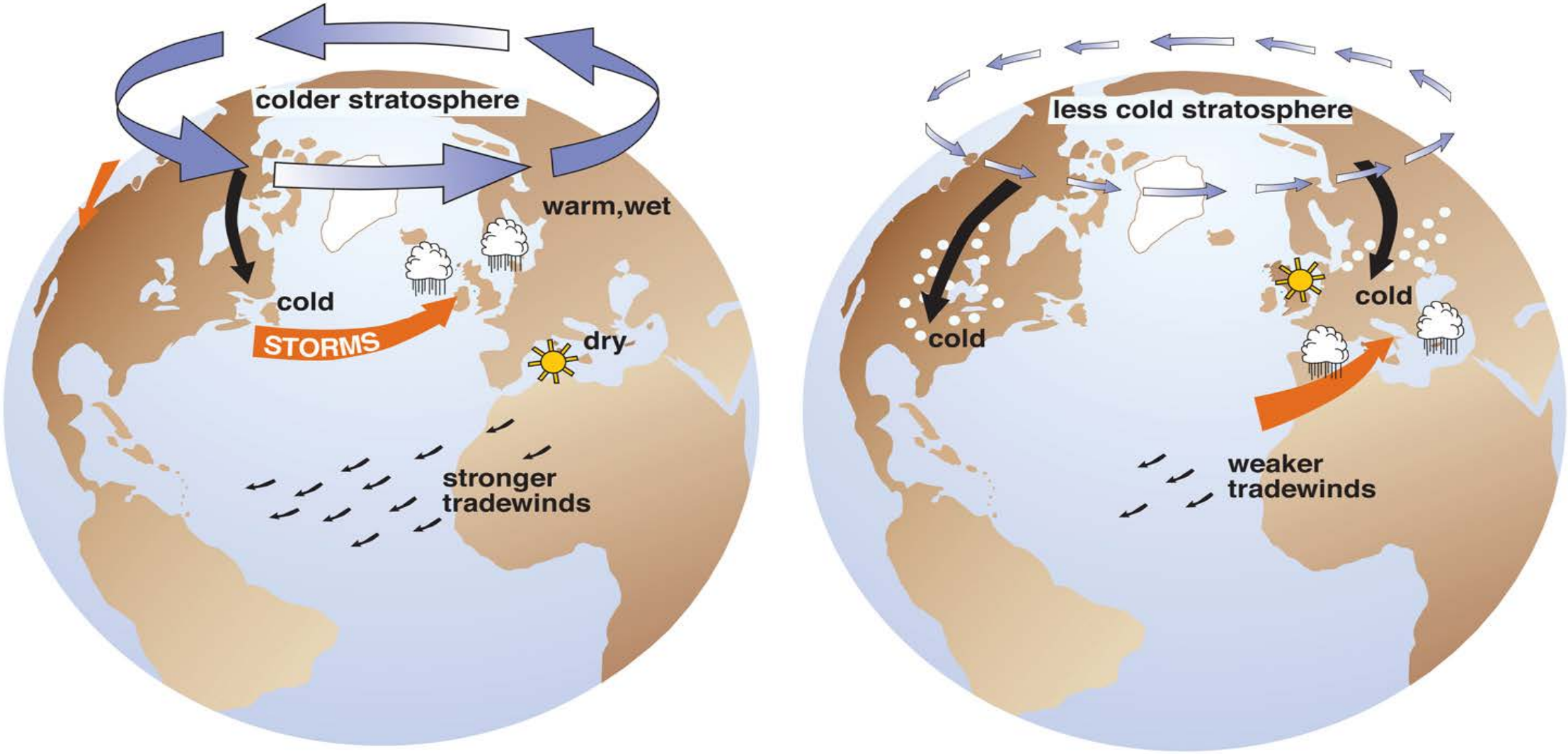
Global La Nina Anomalies



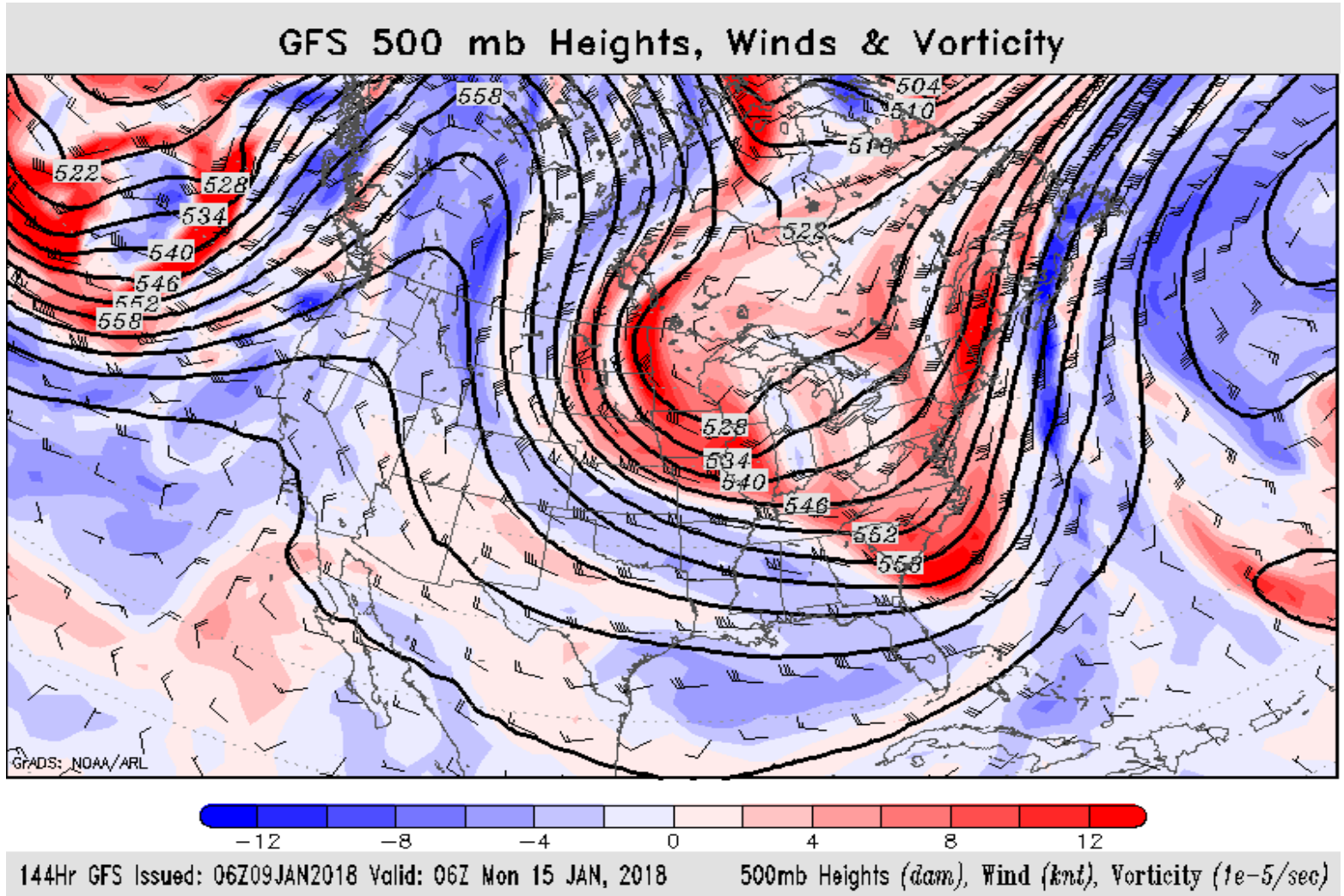
Winter Temperature Response to La Nina



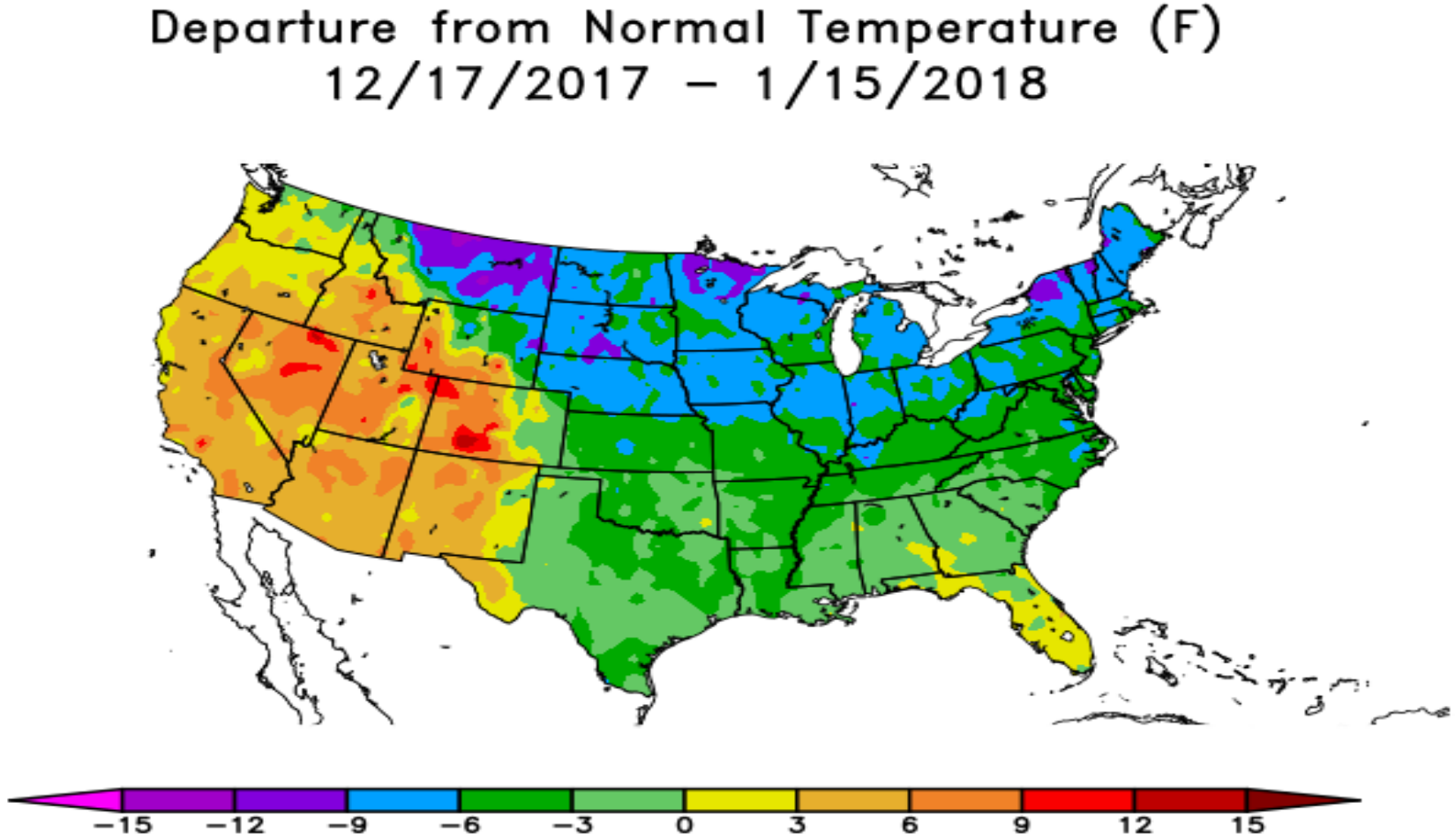
Arctic Oscillation (Polar Vortex)



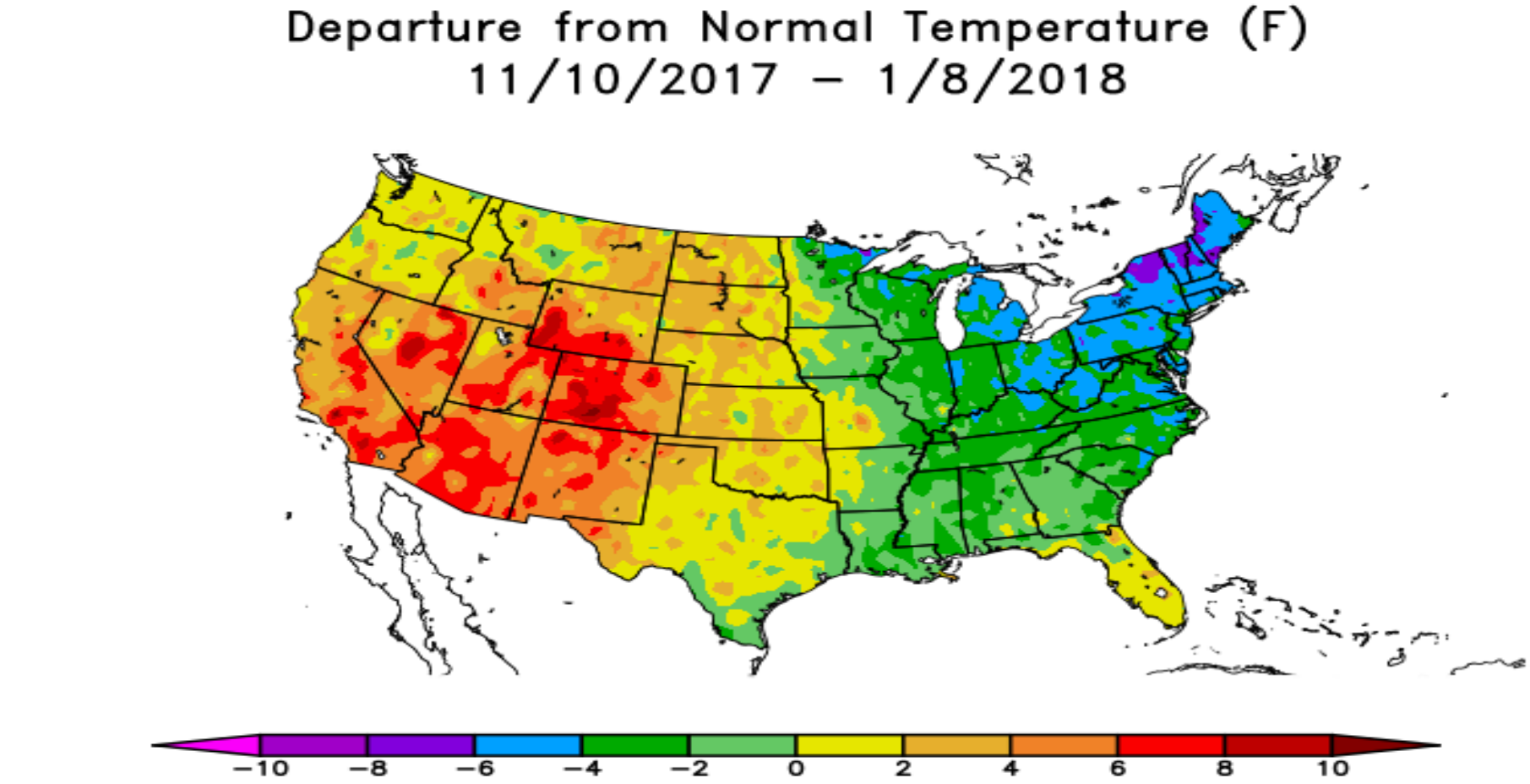
GFS 500 mb (Negative Artic Oscillation)



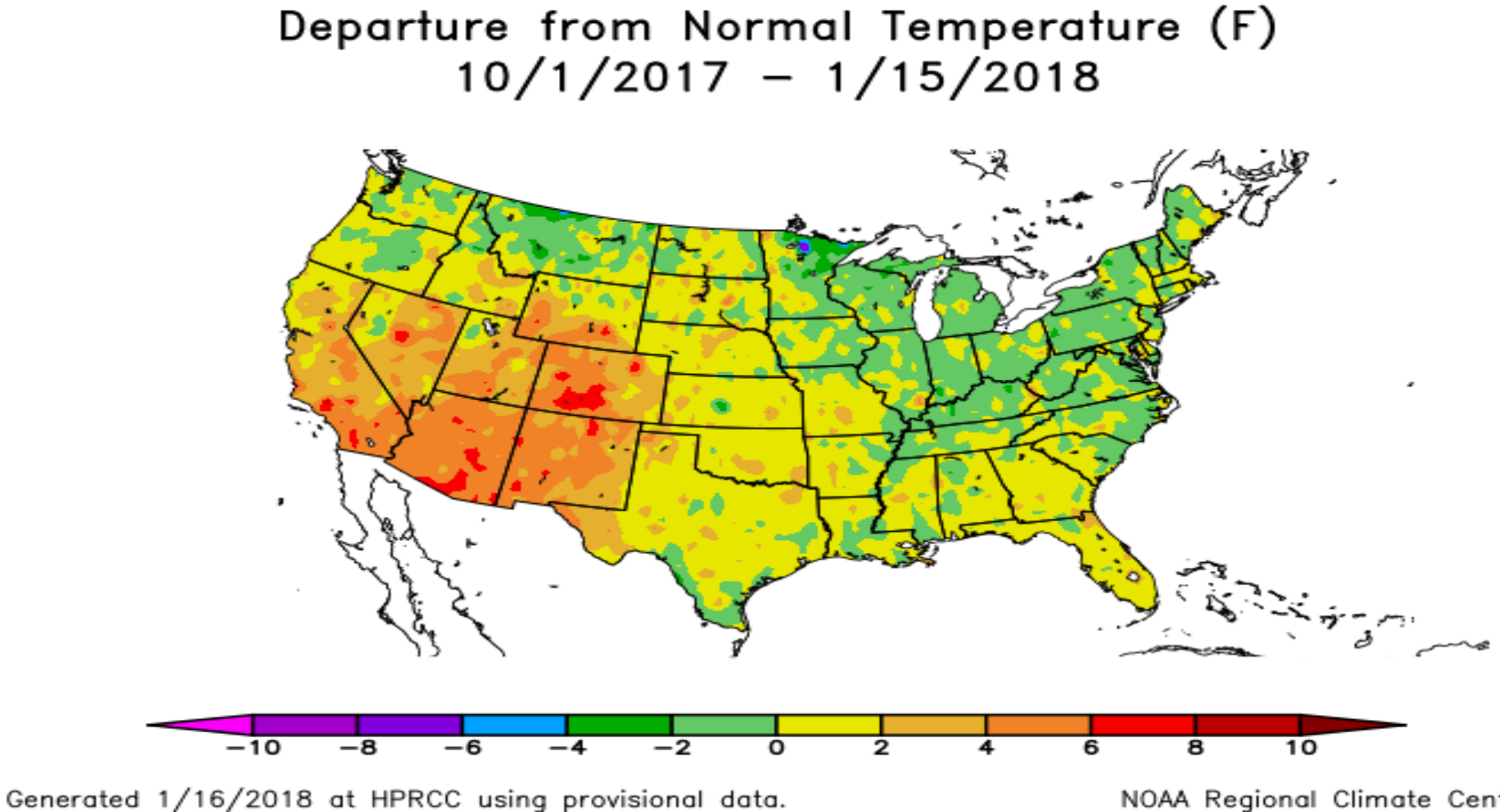
National 30 Day Temperature Trend



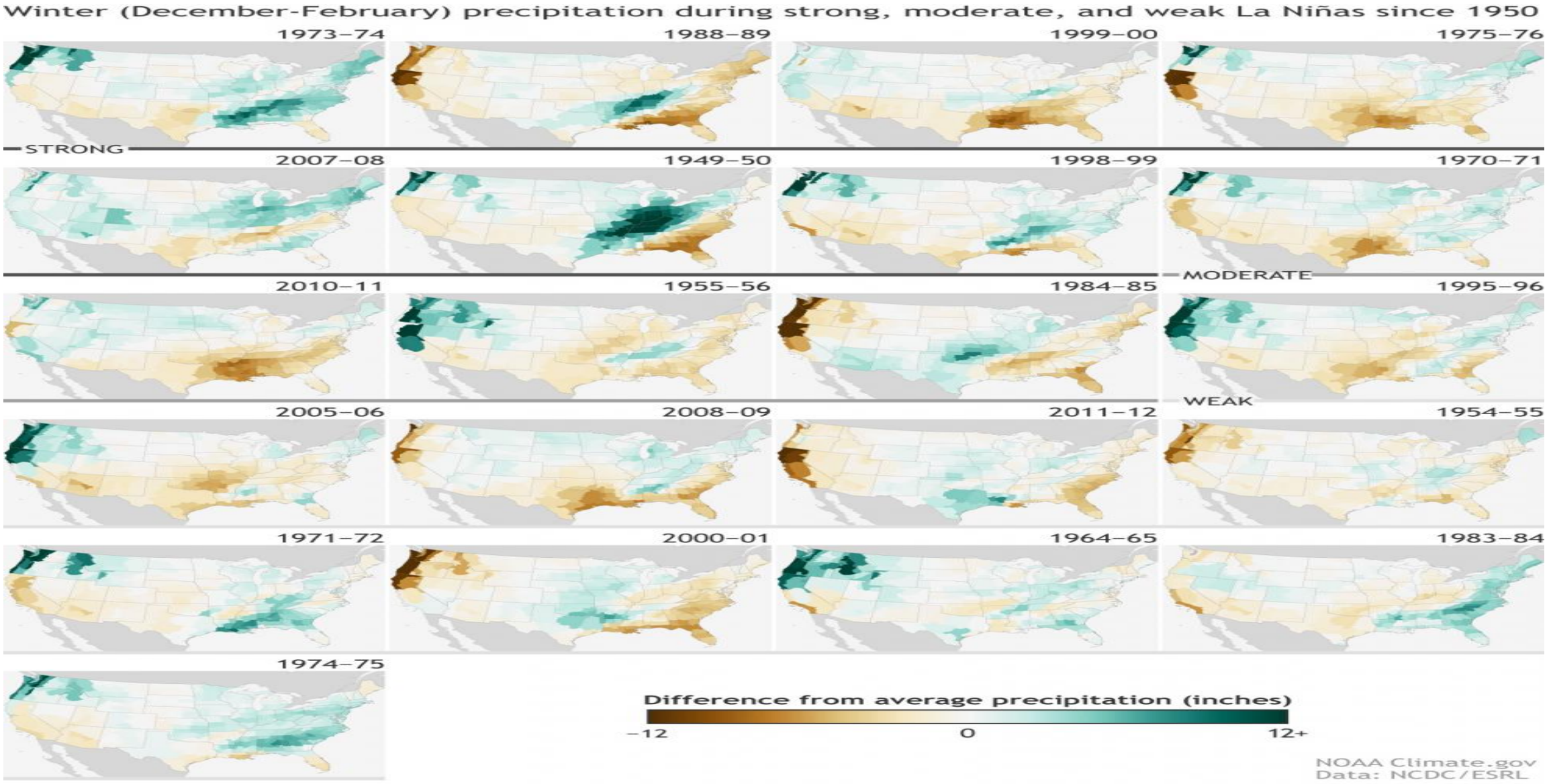
National 60 Day Temperature Trend



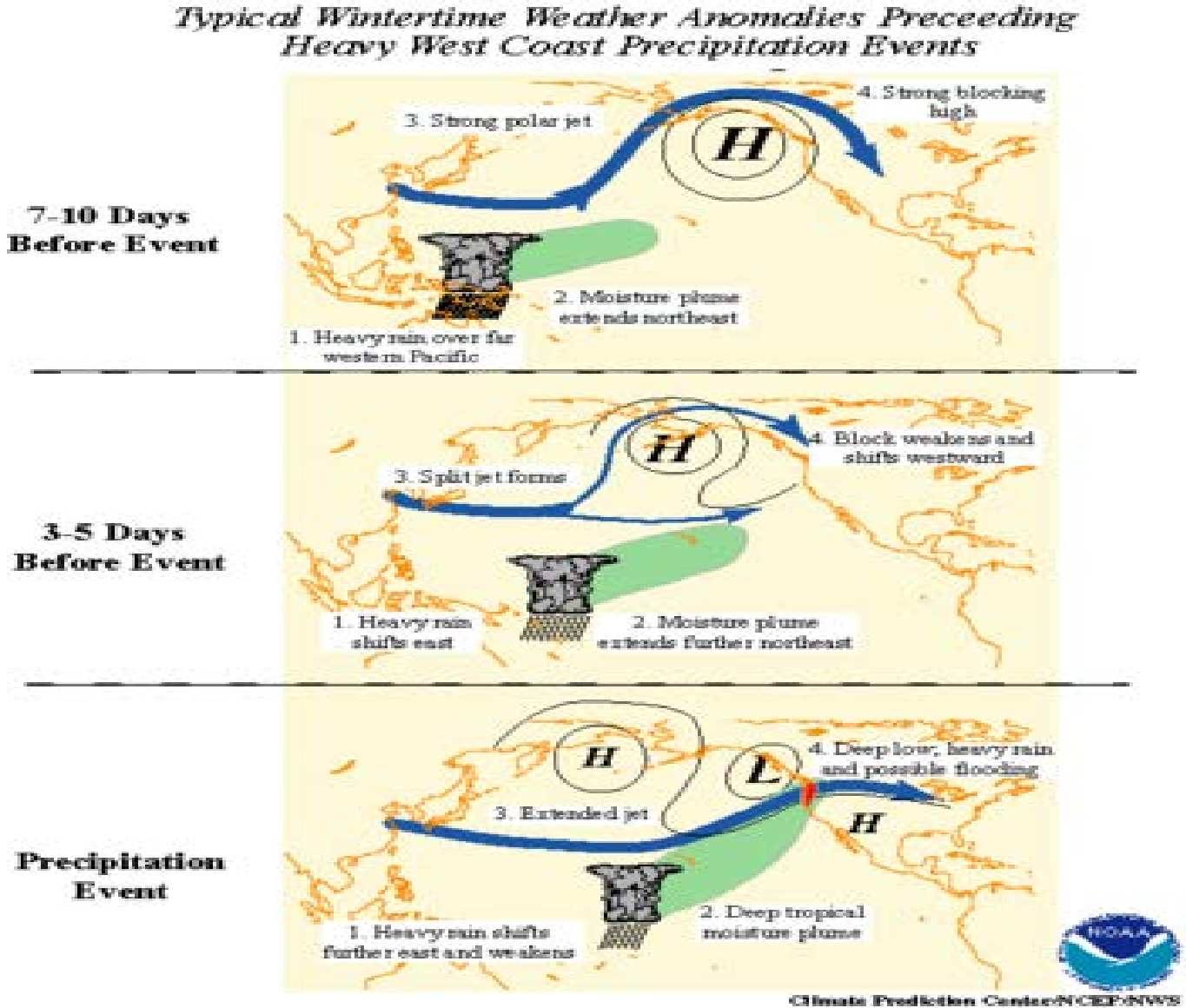
National Water Year Temperature Trend



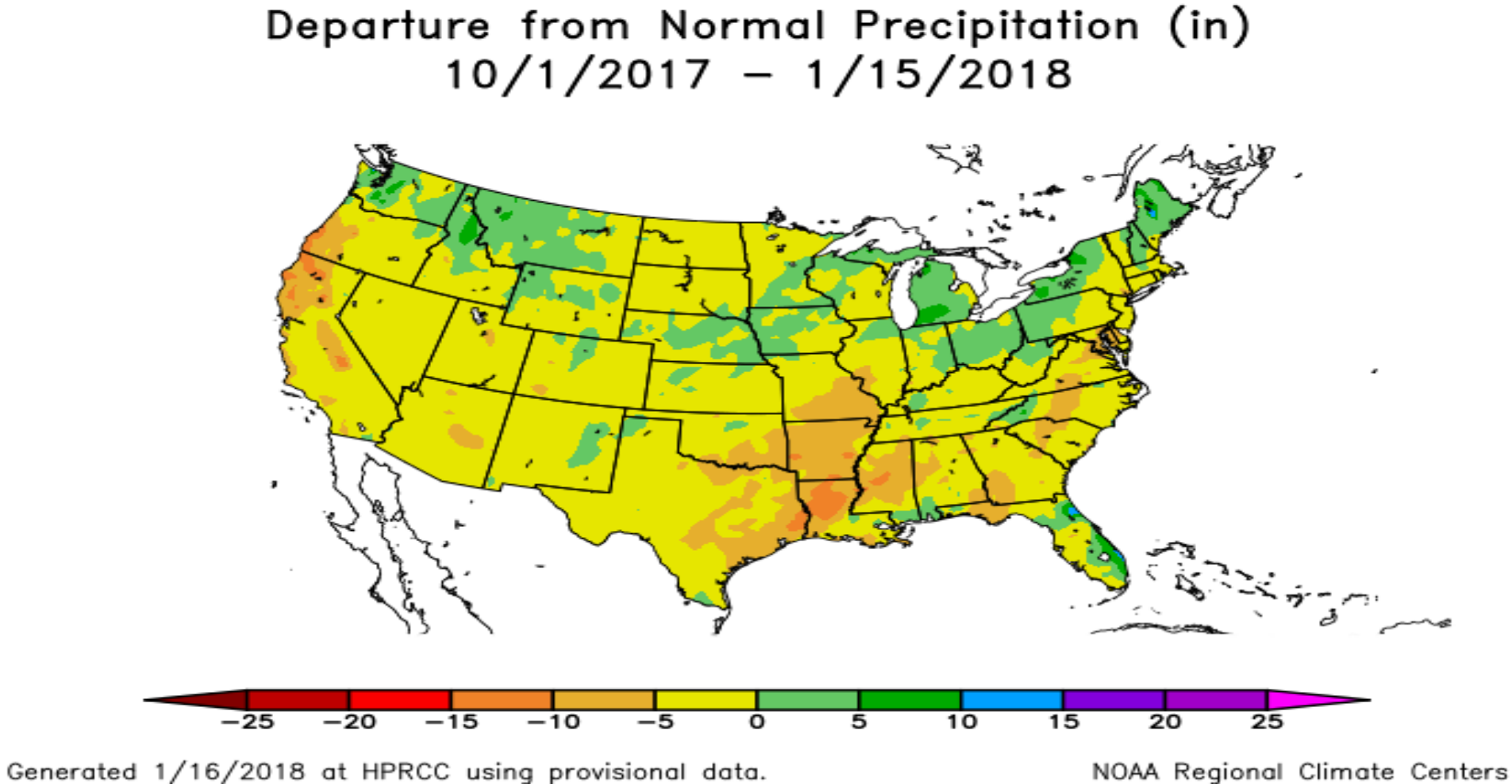
Winter Precipitation Response to La Nina



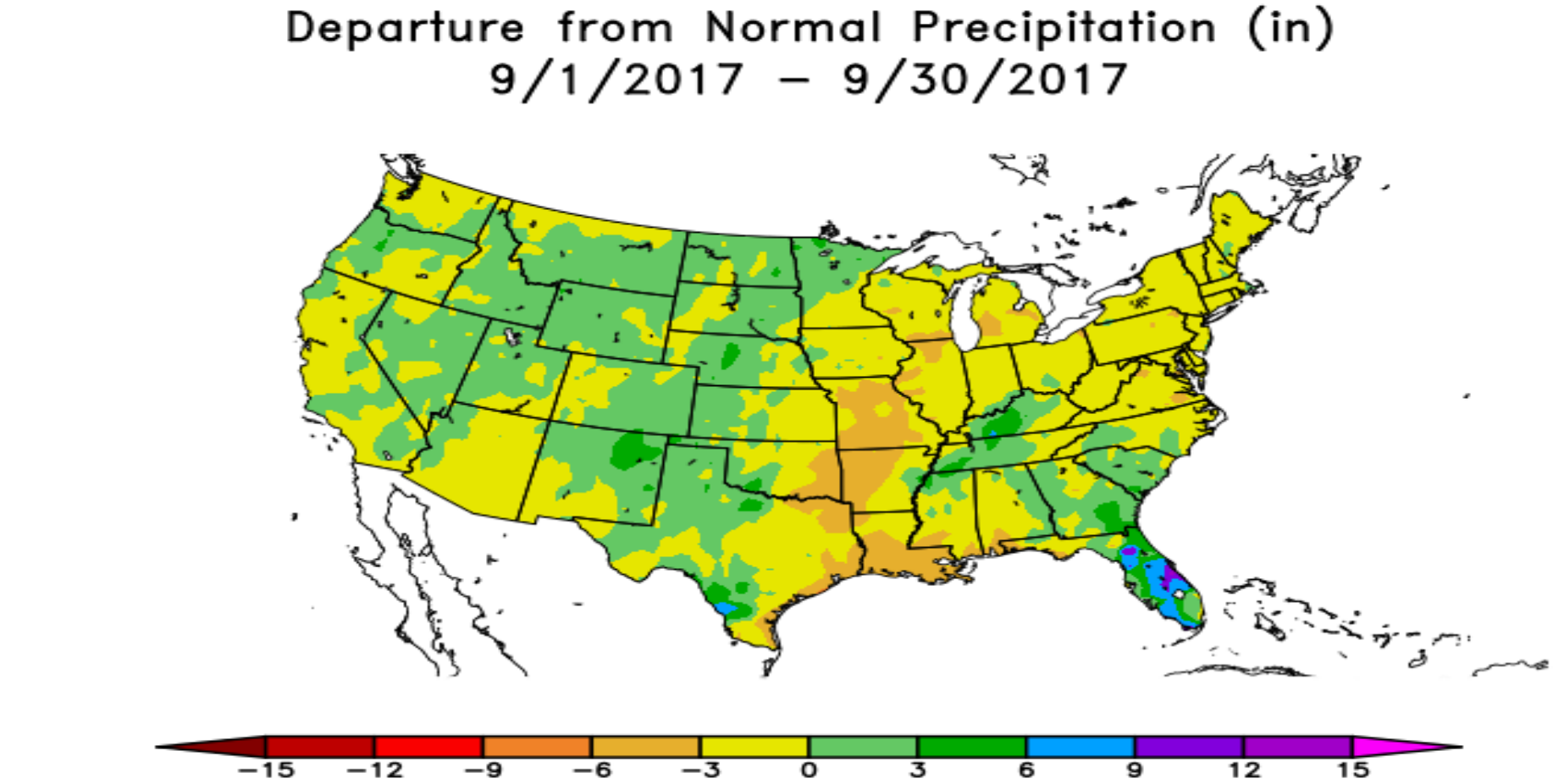
Madden Julian Oscillation



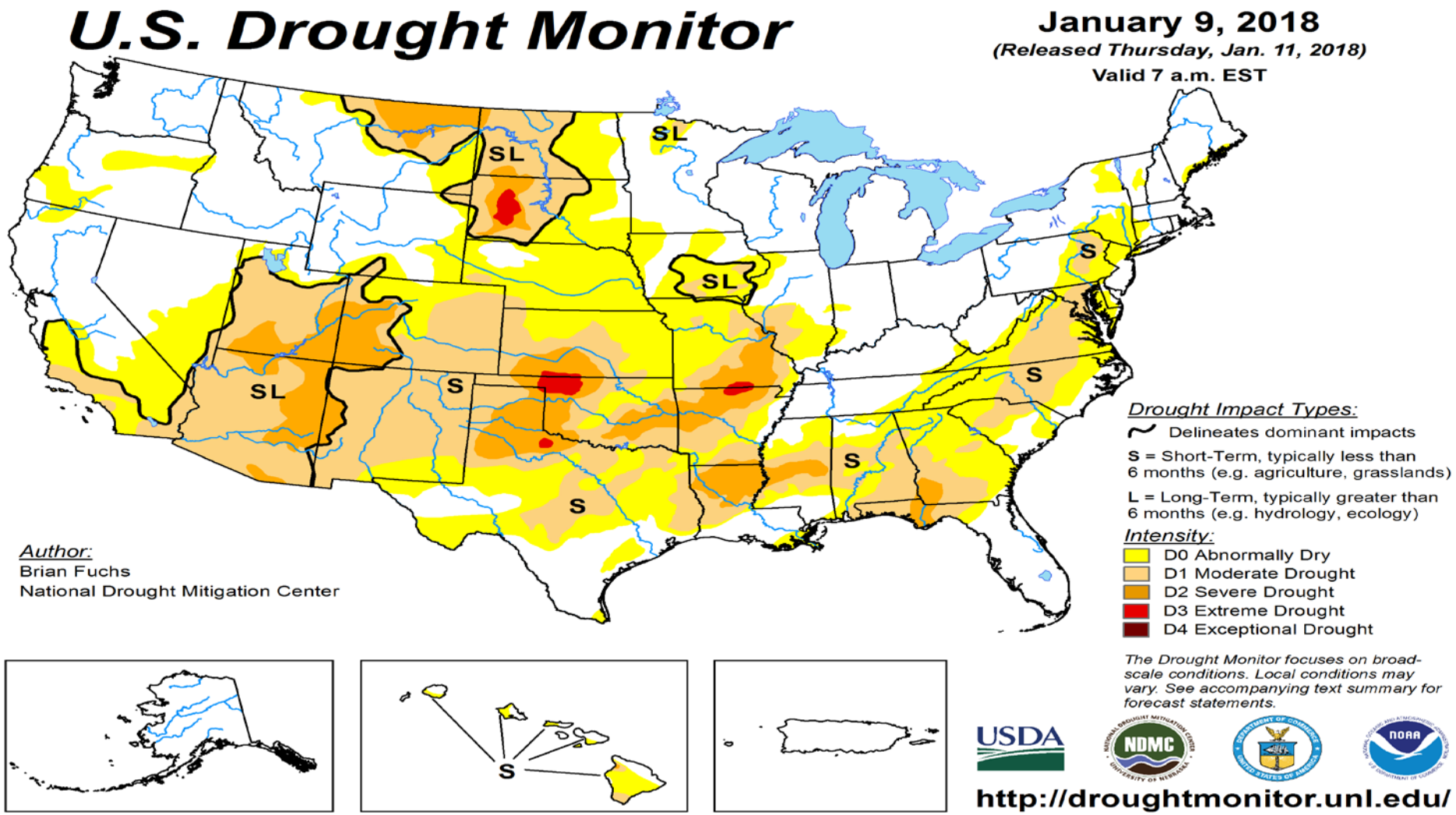
National Water Year Precipitation Trend



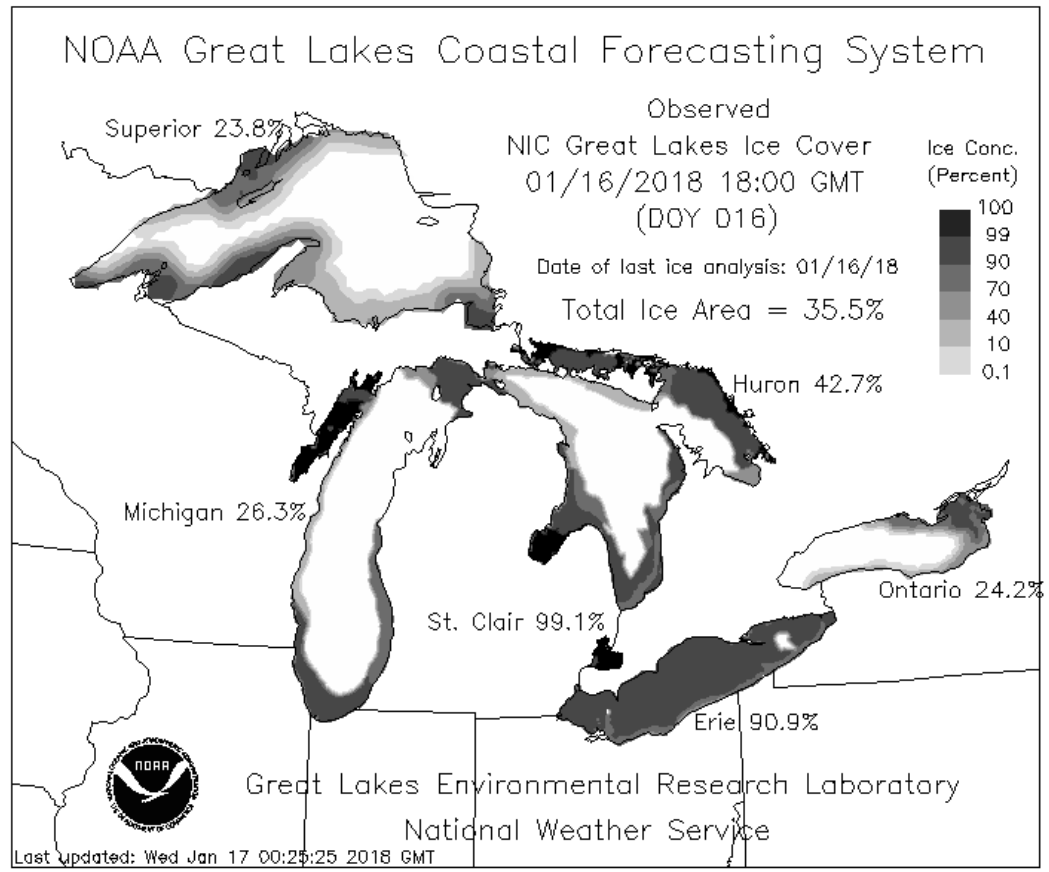
September 2017 Water Year Precipitation Trend



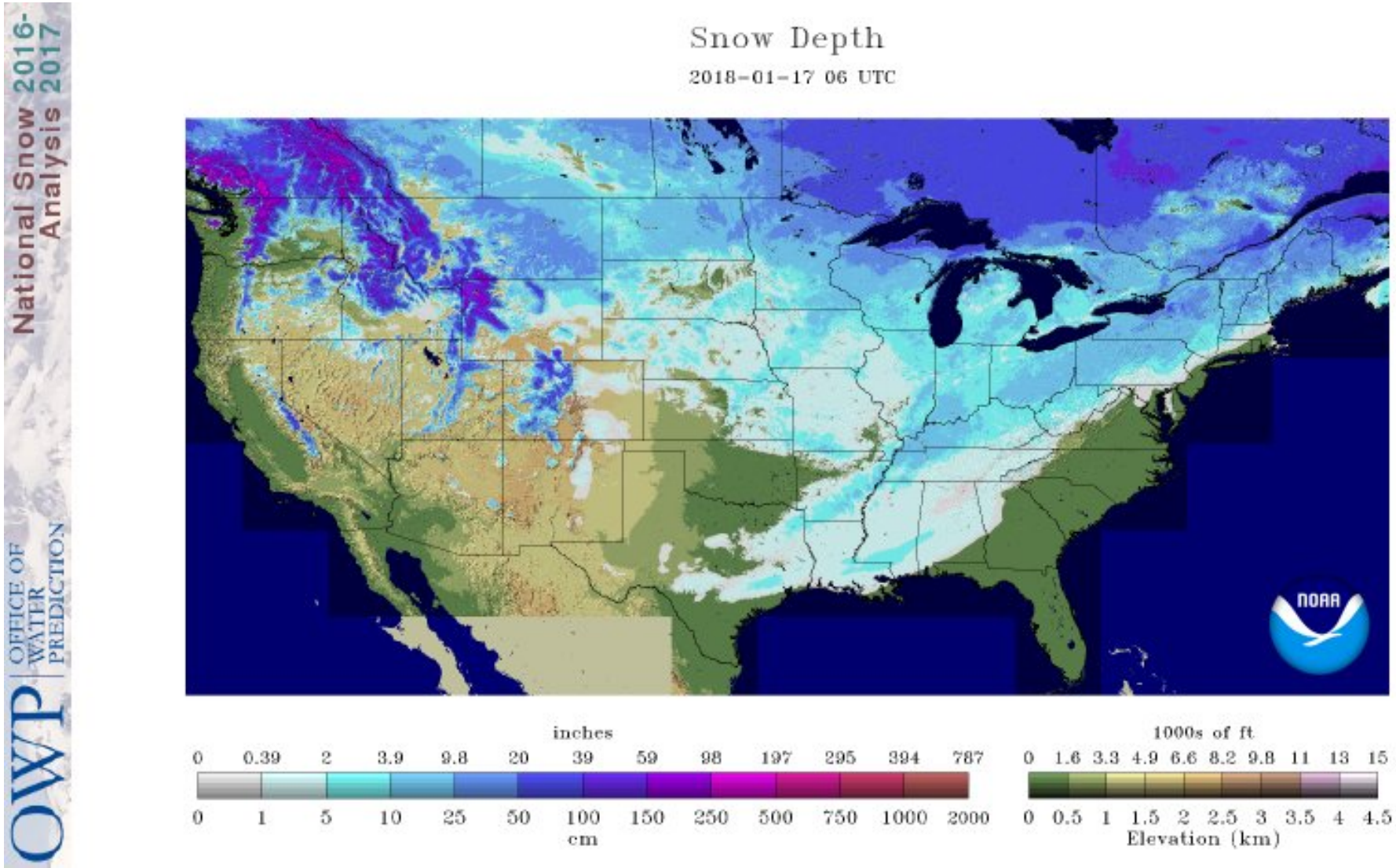
Current U.S. Drought Monitor



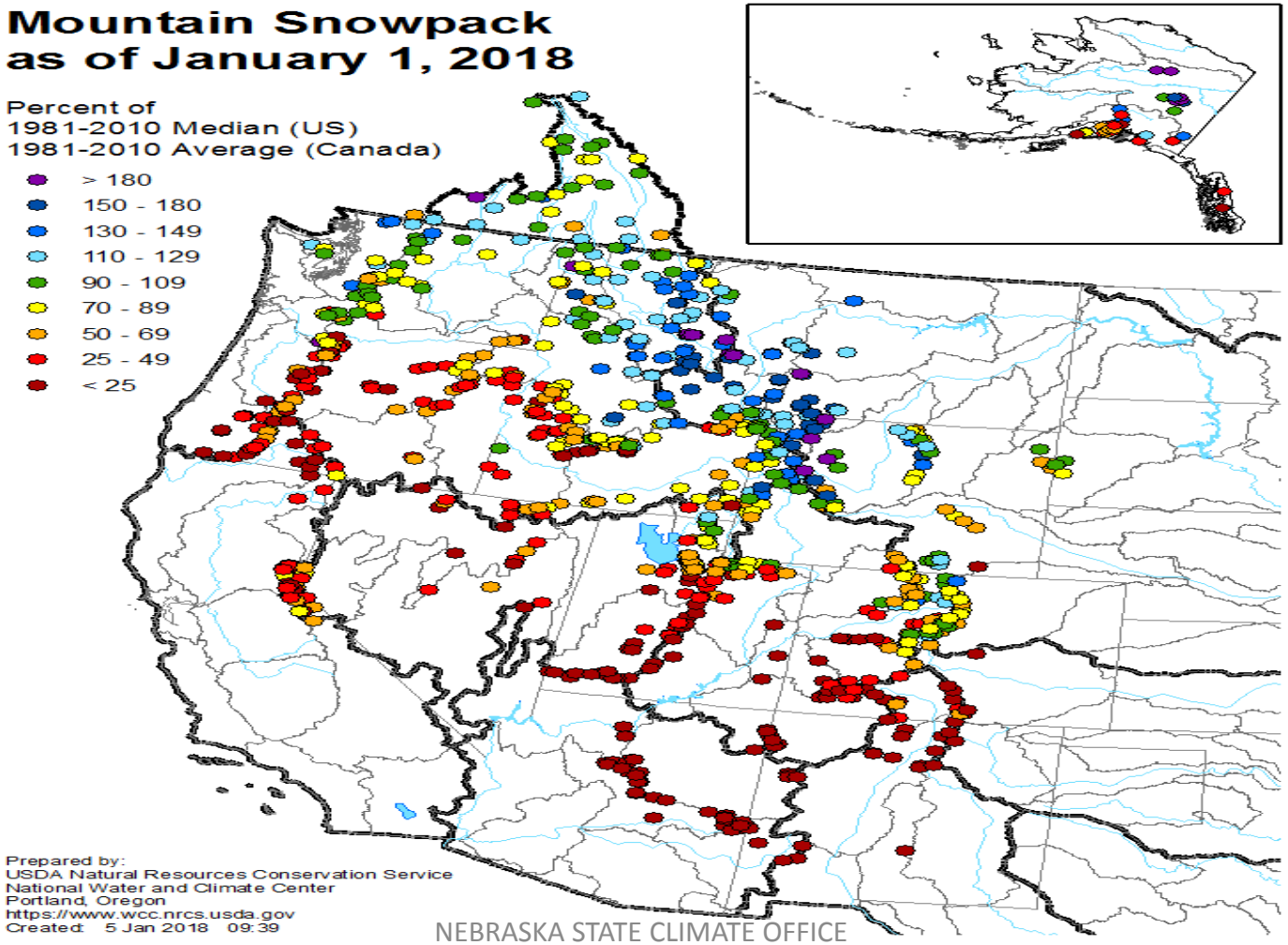
Current Great Lakes Ice Cover



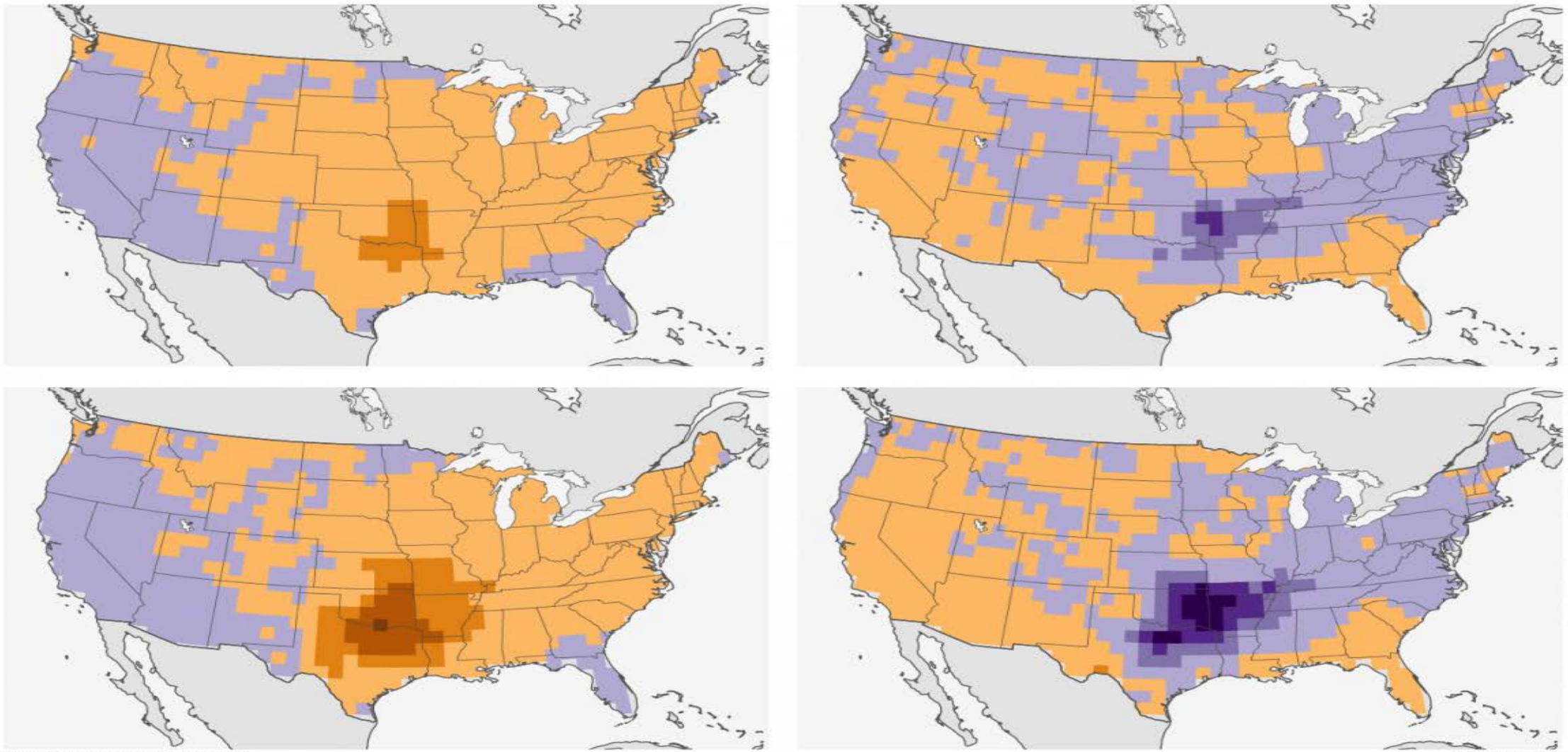
U.S. Snow Depth Map – 1/3/18



Current Western U.S. Snow Pack Conditions

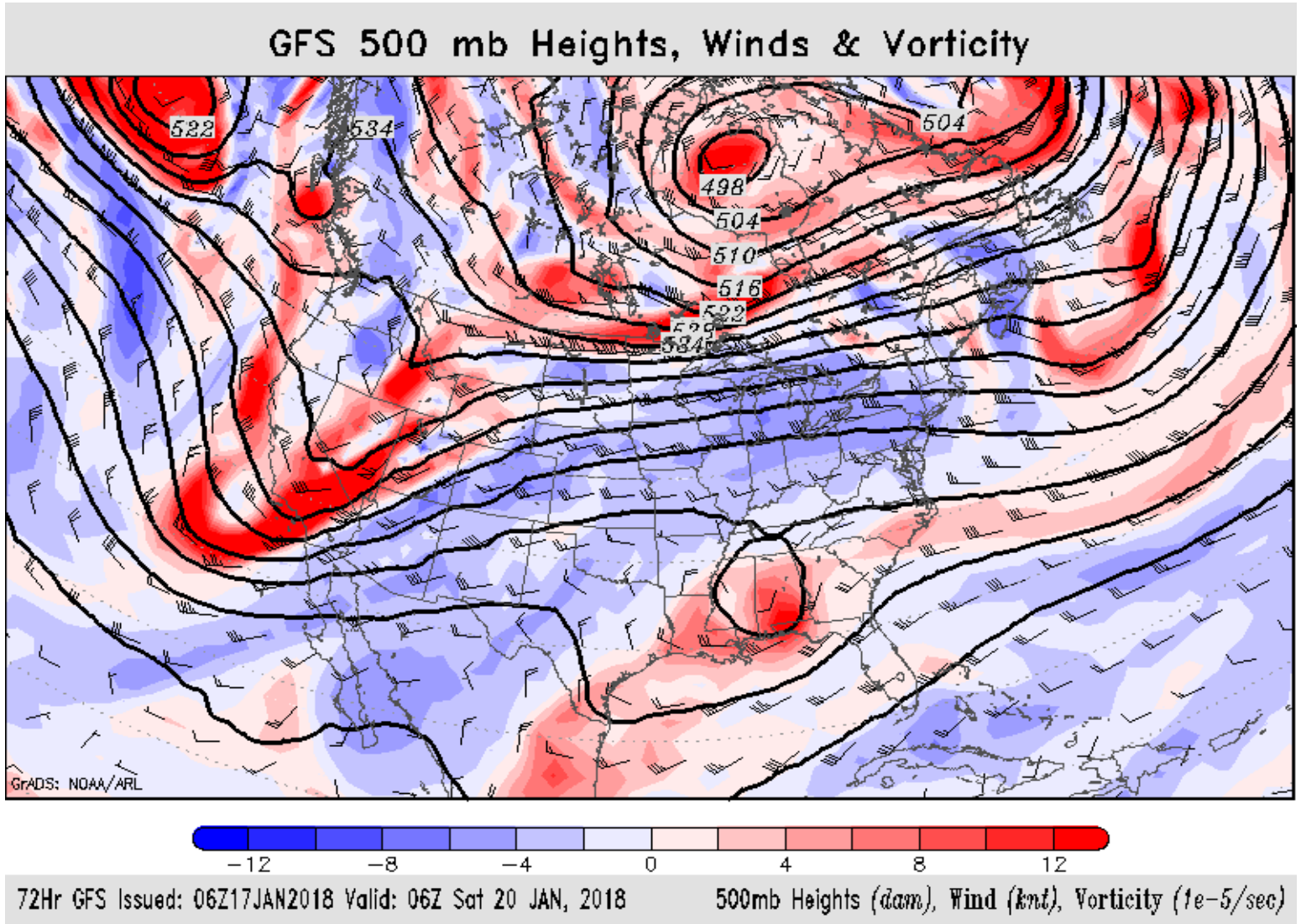


Hail/Tornado Frequency During ENSO Events

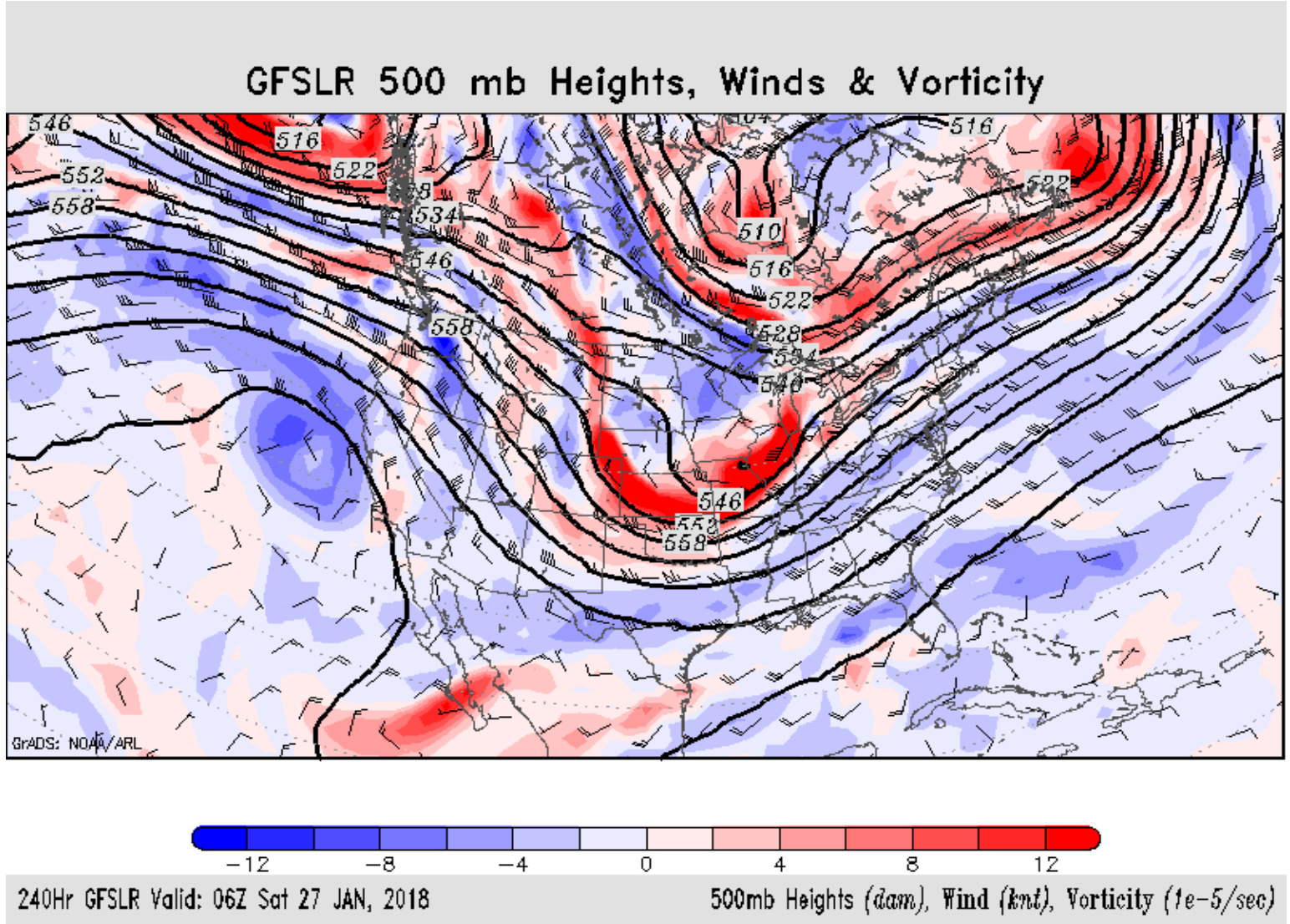


Influence of El Niño (*left*) and La Niña (*right*) on the frequency of tornadoes (*top*) and hailstorms (*bottom*)

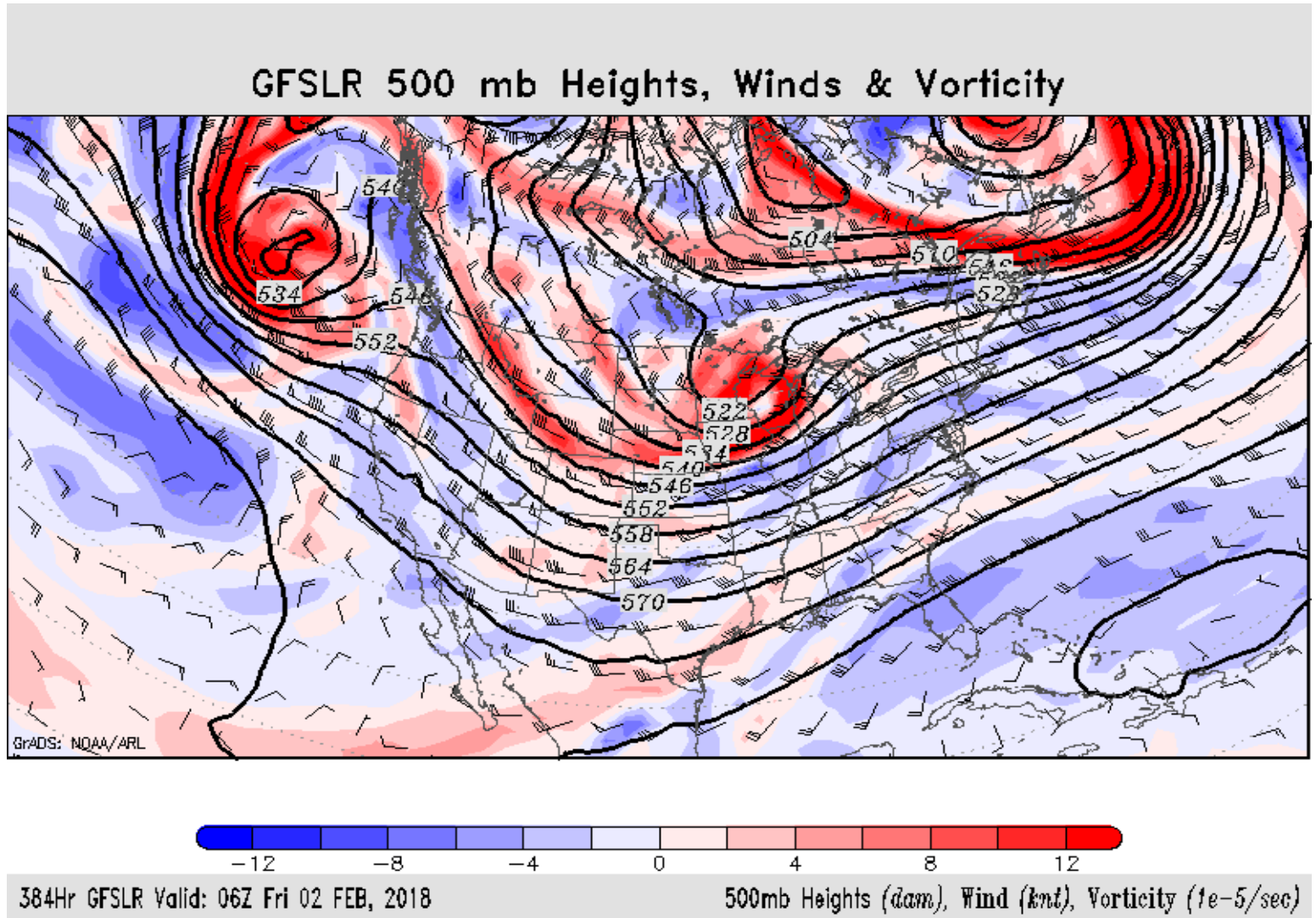
GFS 500 mb Day 3 Forecast



GFS 500 mb Day 10 Forecast

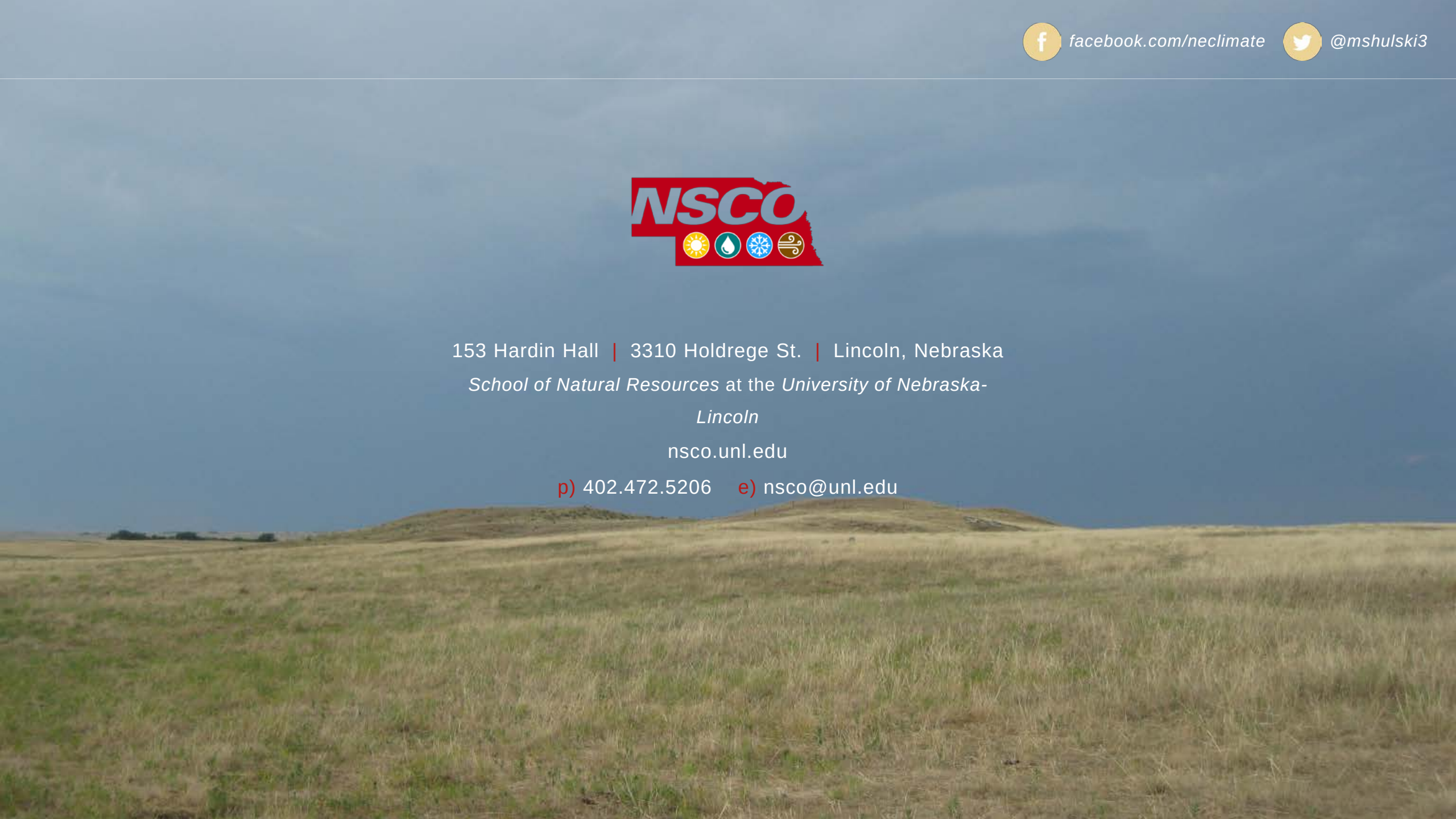


GFS 500 mb Day 16 Forecast



Climate Drivers to Watch this Year

- Snow Pack – drought implications and irrigation costs
- Ice Accumulations
- La Nina end and Atmospheric Response
- Great Lakes ice accumulation and downstream response
- Drought areas merging
- Switch over to El Nino and jet stream response
- Southwestern U.S. Monsoon season
- Fall/winter conditions



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