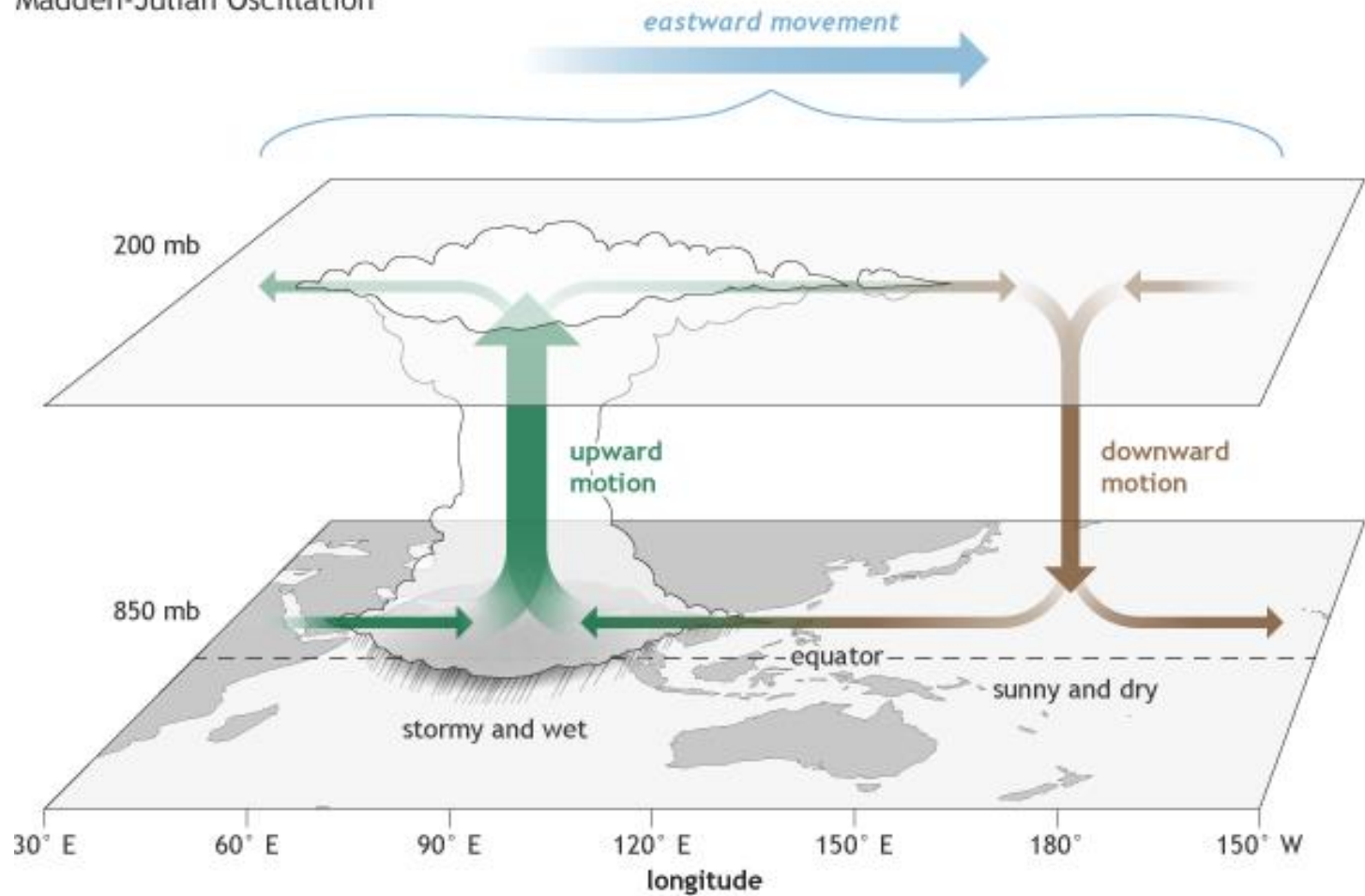


***US GRAIN WEATHER  
SUMMARY / part 2  
EXTENDED***

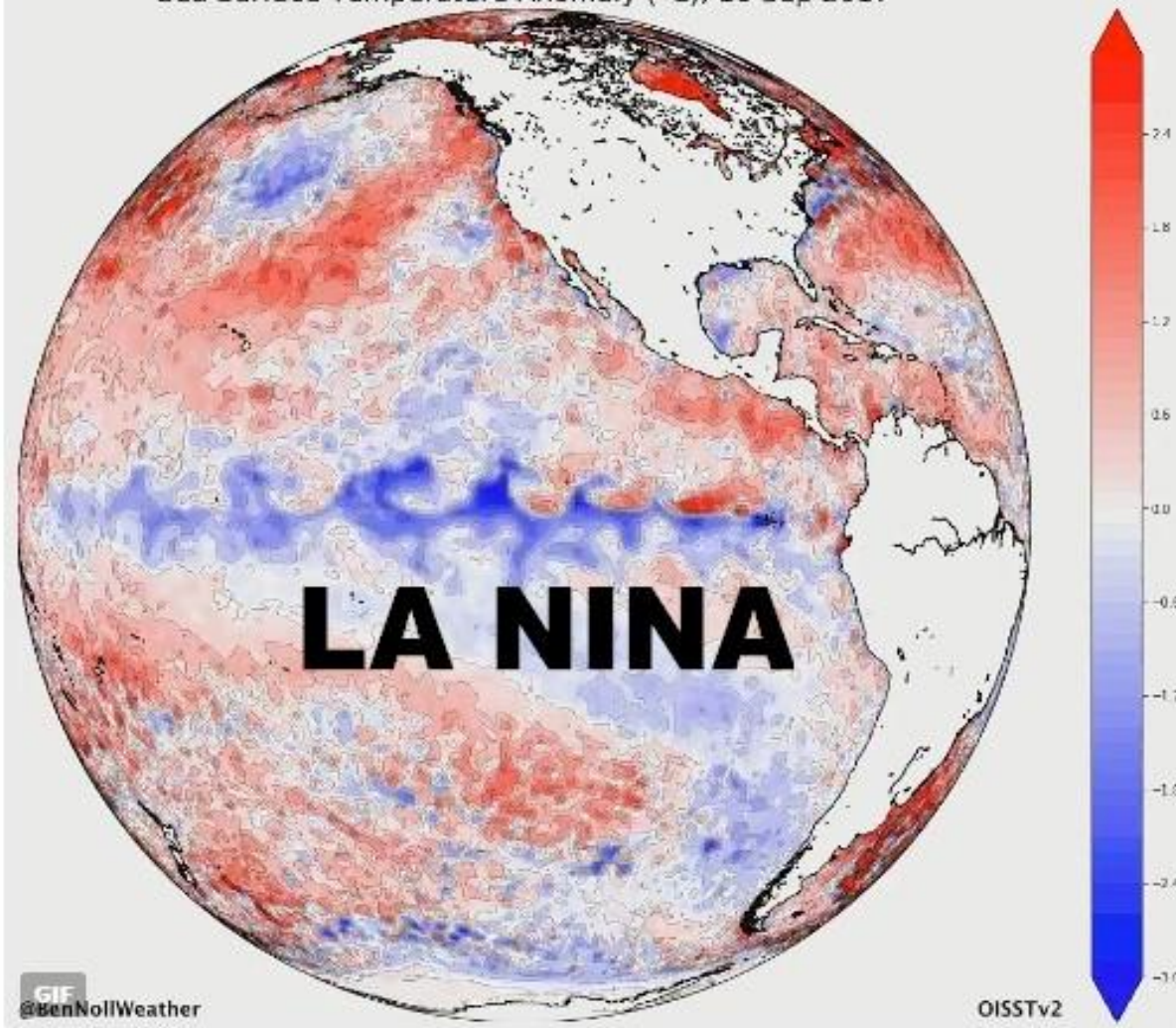
**as of FRIDAY  
13 APRIL 2018**

# LETS TALK MJO/ENSO

Madden-Julian Oscillation



Sea Surface Temperature Anomaly (°C), 10 Sep 2017



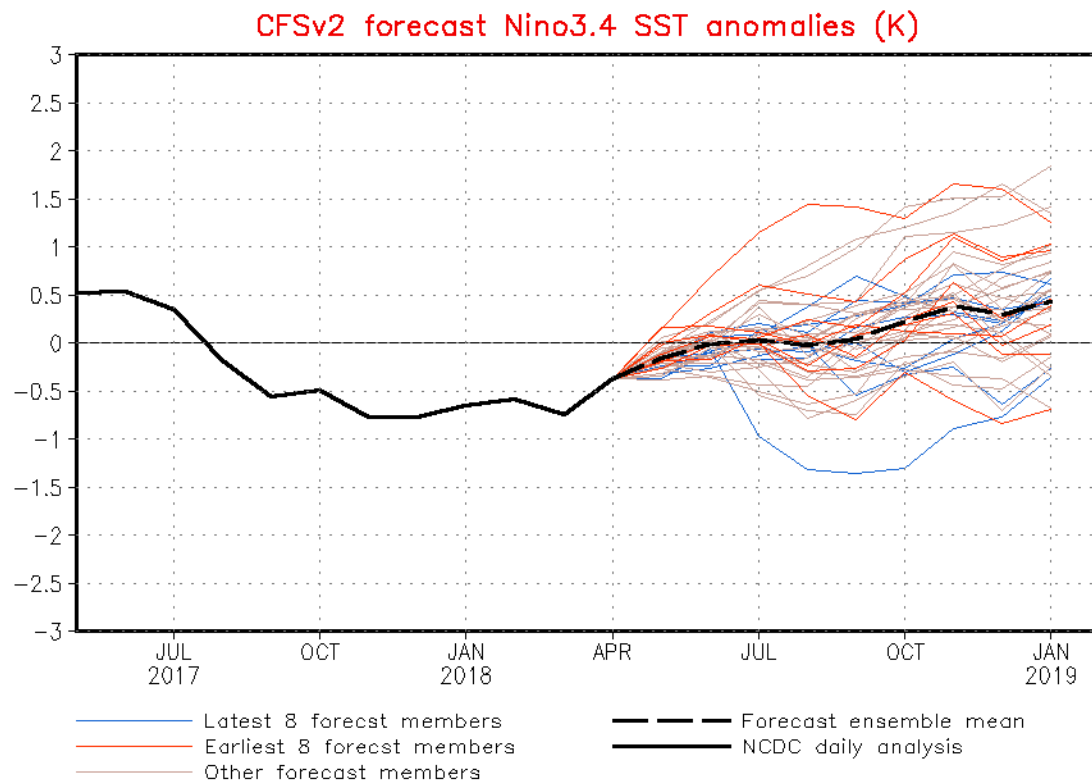
6:29 AM - 13 Sep 2017

# BIG CHANGE IN CFS.. For last 30 days CFS has showed La Nina/ neutral conditions into MAY and thru the Summer. New CFS now shows slow warming late Summer/ Autumn

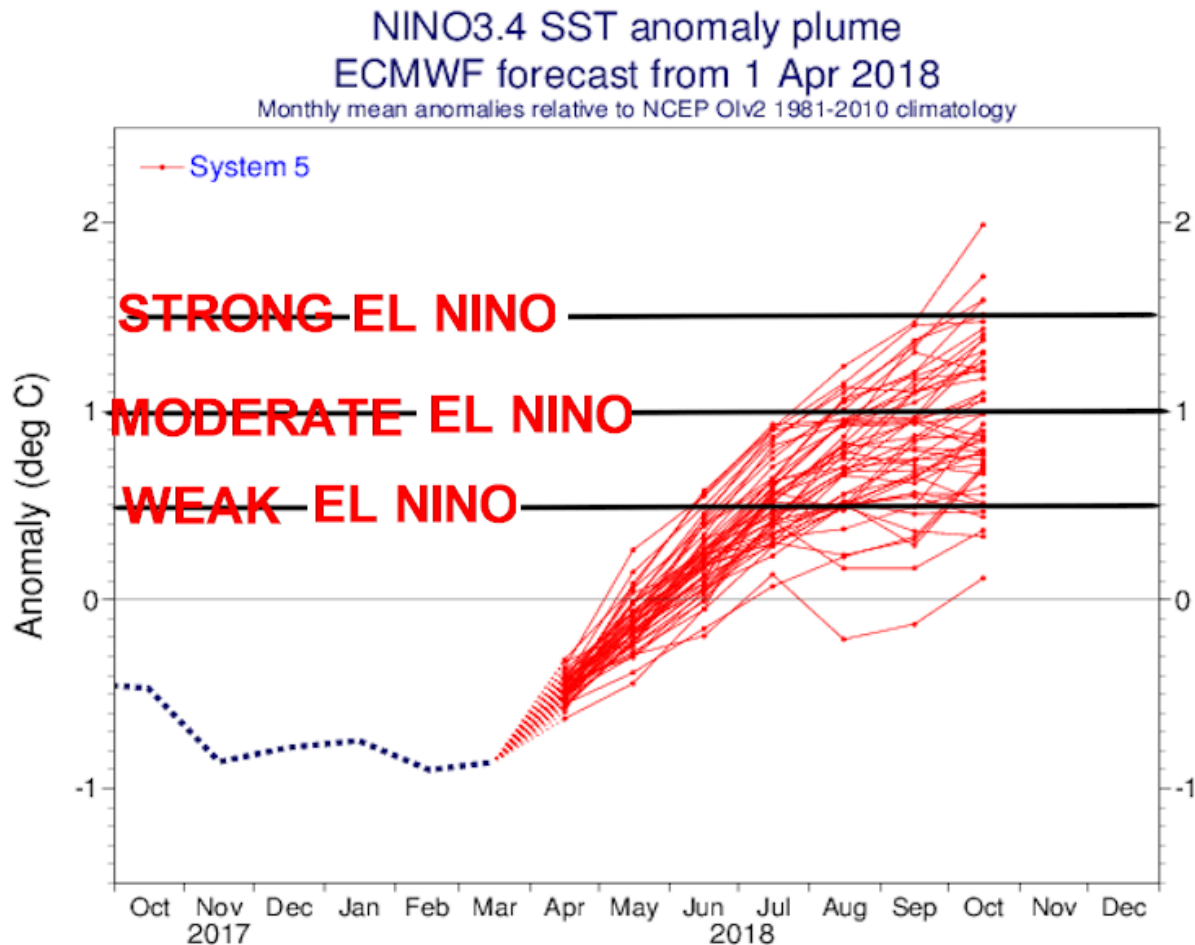


NWS/NCEP/CPC

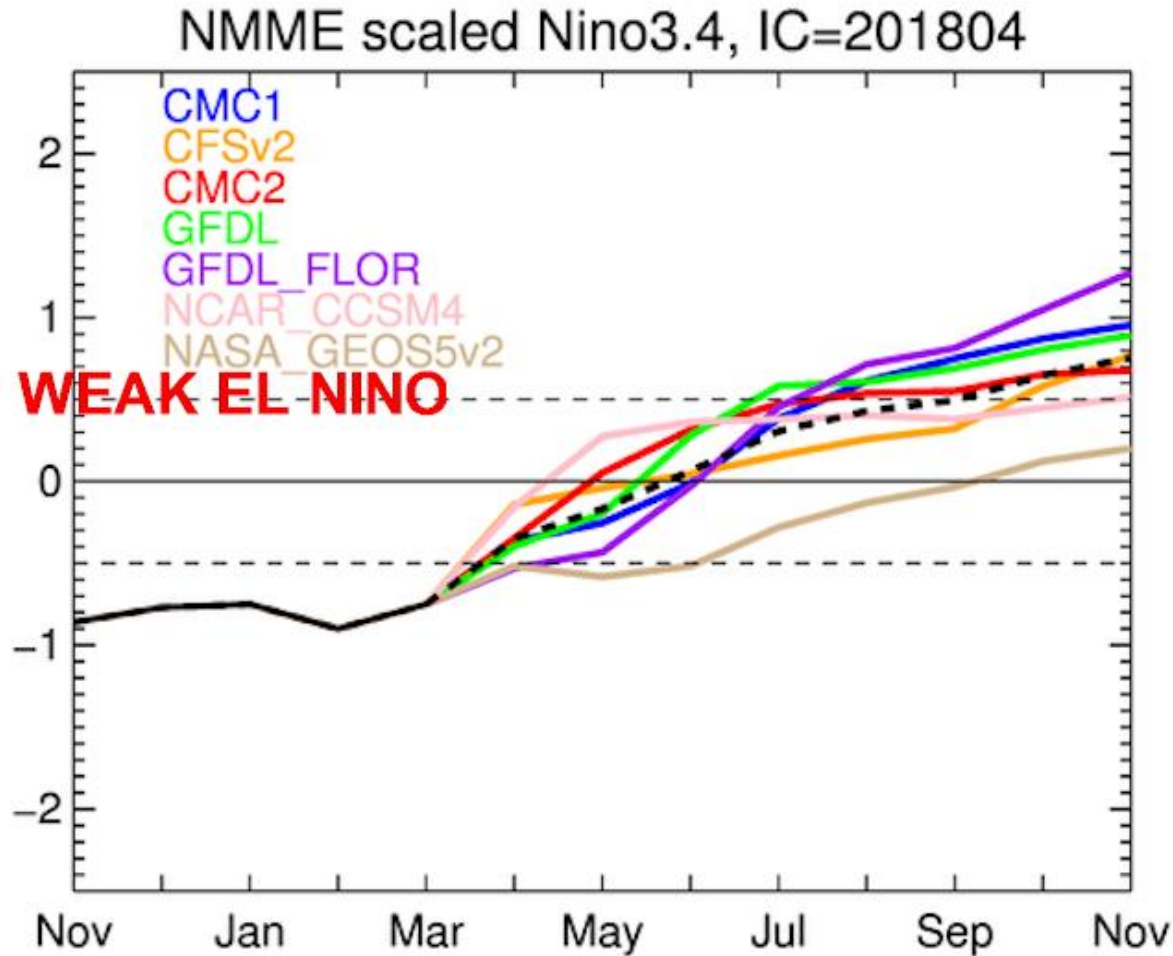
Last update: Thu Apr 12 2018  
Initial conditions: 2Apr2018-11Apr2018



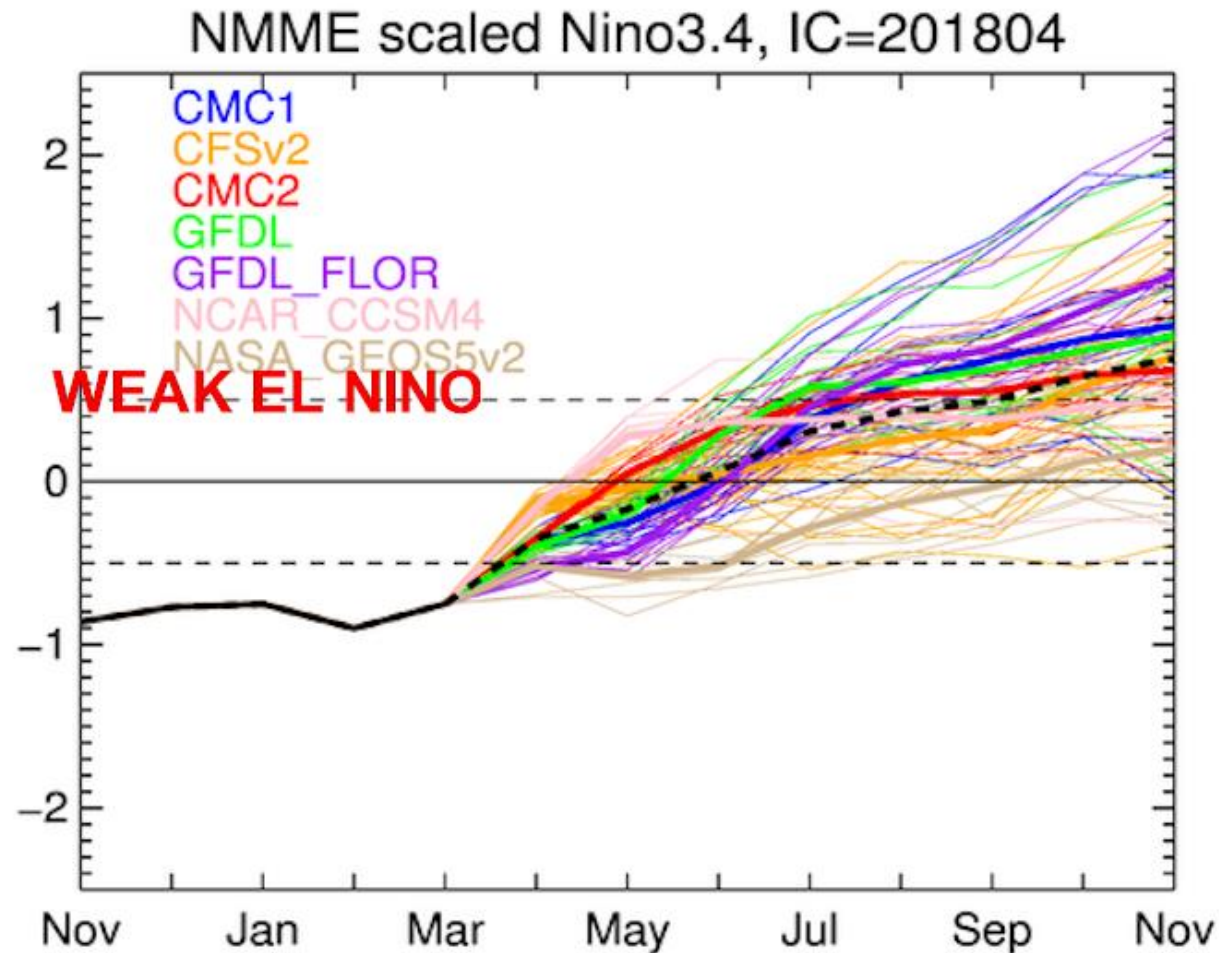
# EURO ENSO PLUMES.... April1 forecast Clearly showing weak to moderate El Nino JULY and AUGUST into the Autumn. **THIS COULD HAVE SIGNIFICANT IMPLICATIONS FOR THE 2<sup>ND</sup> HAVE OF THE SUMMER**



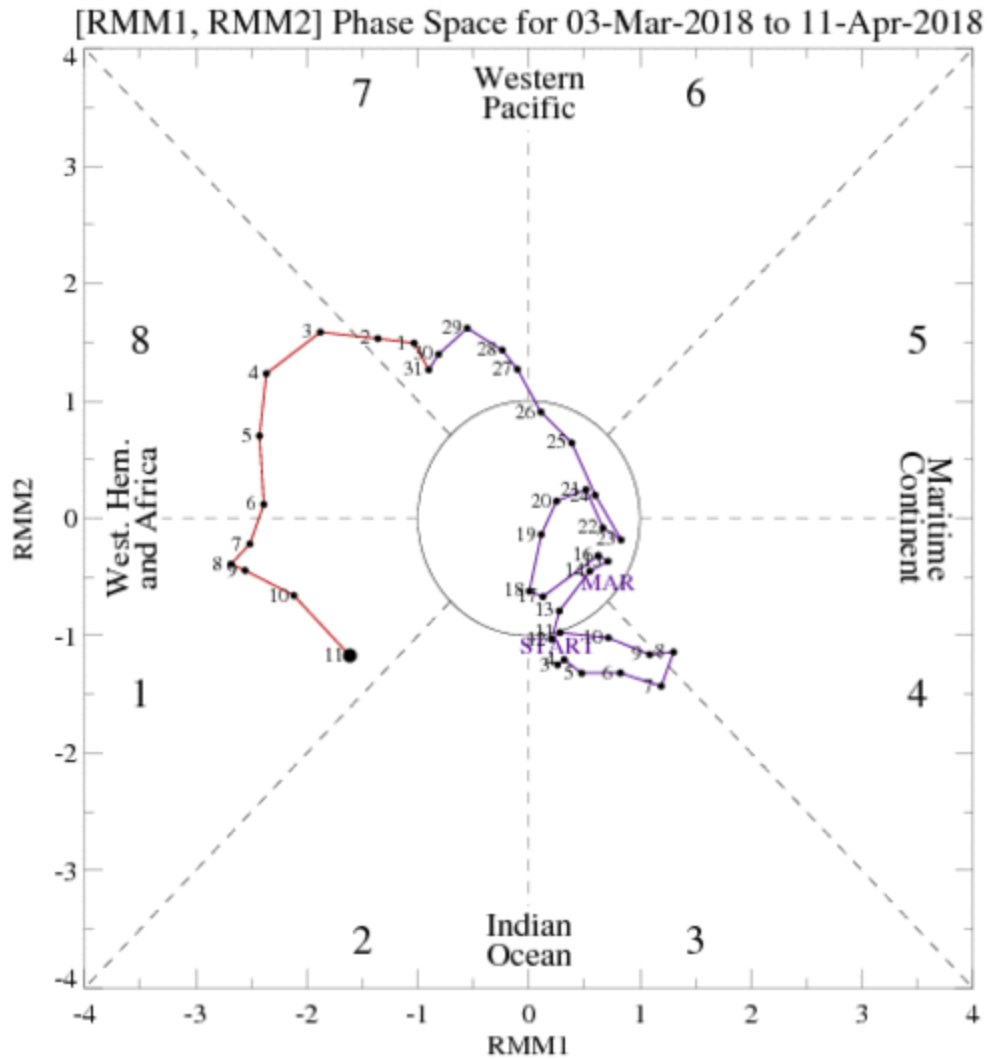
**CLIMATE MODEL MEANS for ENSO region  
as of APRIL 5 ... Not as aggressive as  
ECMWF but so show weak El Nino in 2<sup>nd</sup> half  
of Summer & for Hurricane season**



# CLIMATE MODEL plumes or spreads for ENSO region as of APRIL 5 ...

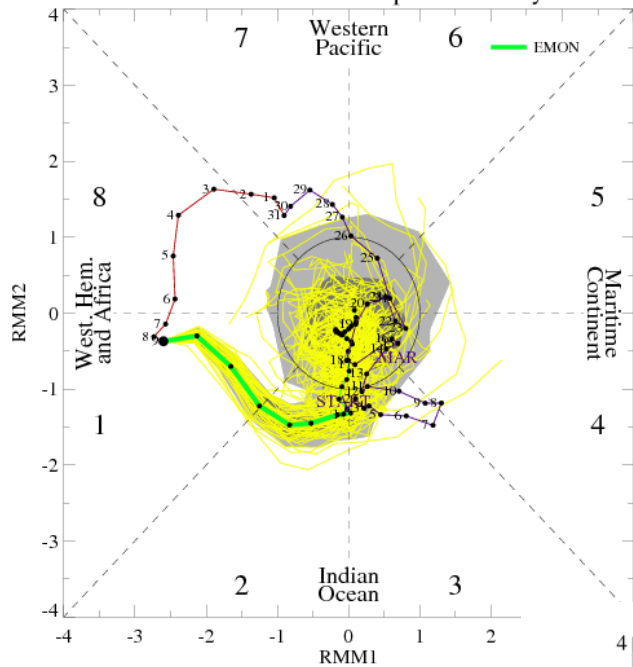


# MJO IS IN PHASE 1



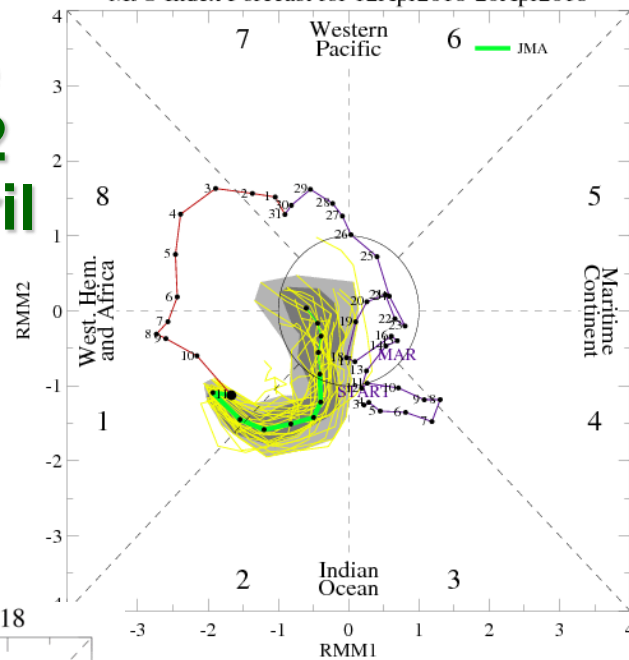


MJO Index Forecast for 10Apr2018-11May2018

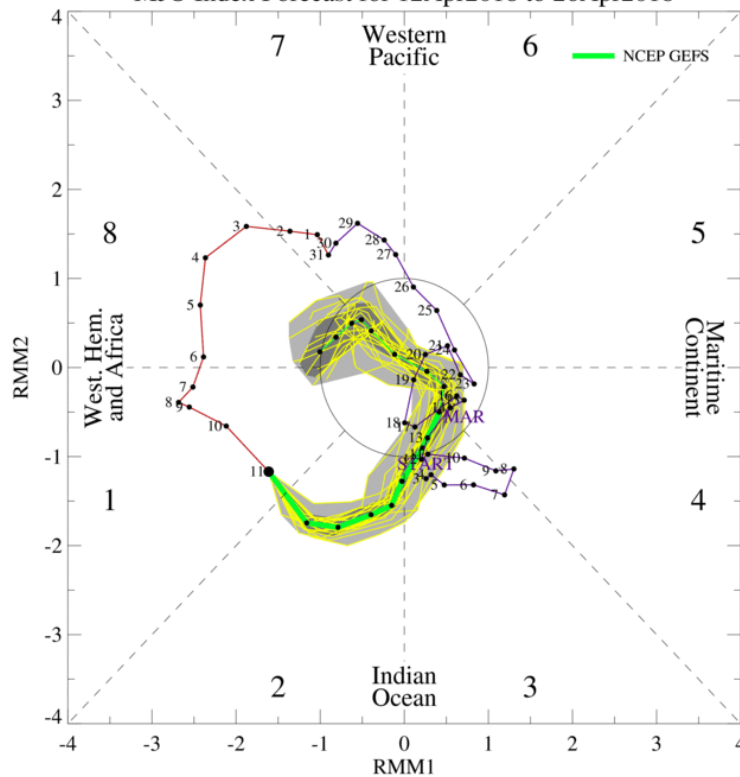


**MJO now in phase 1 reaches phase 2 in last week of April then turns into Neutral circle—probably does not reach 3**

MJO Index Forecast for 12Apr2018-20Apr2018

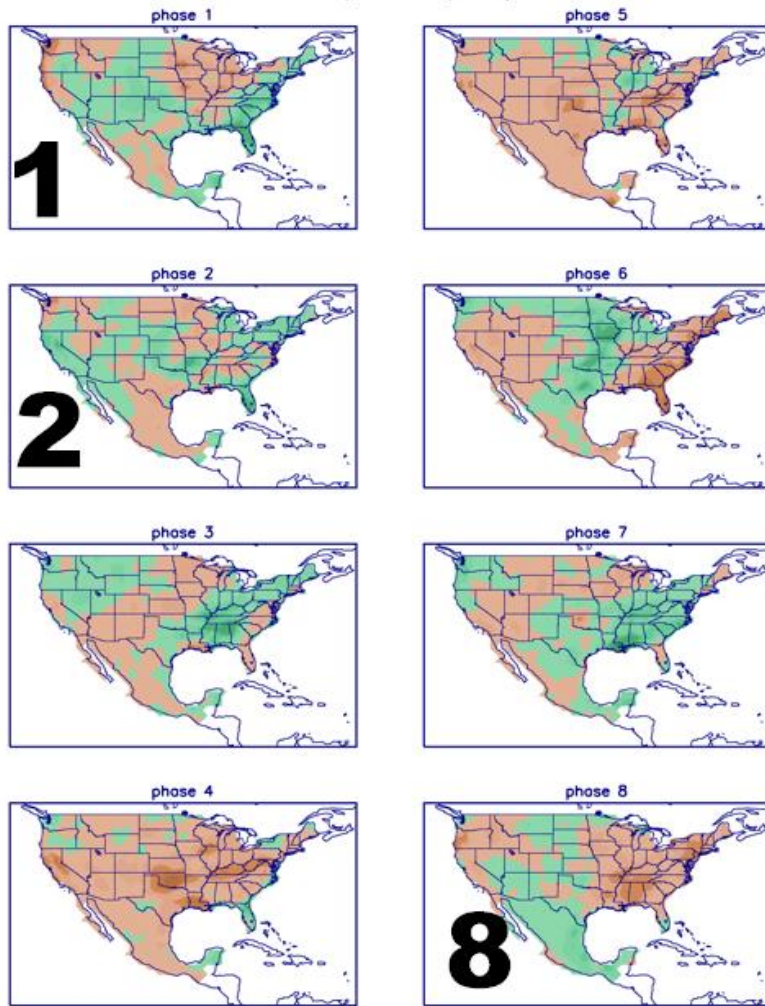


MJO Index Forecast for 12Apr2018 to 26Apr2018

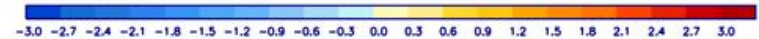
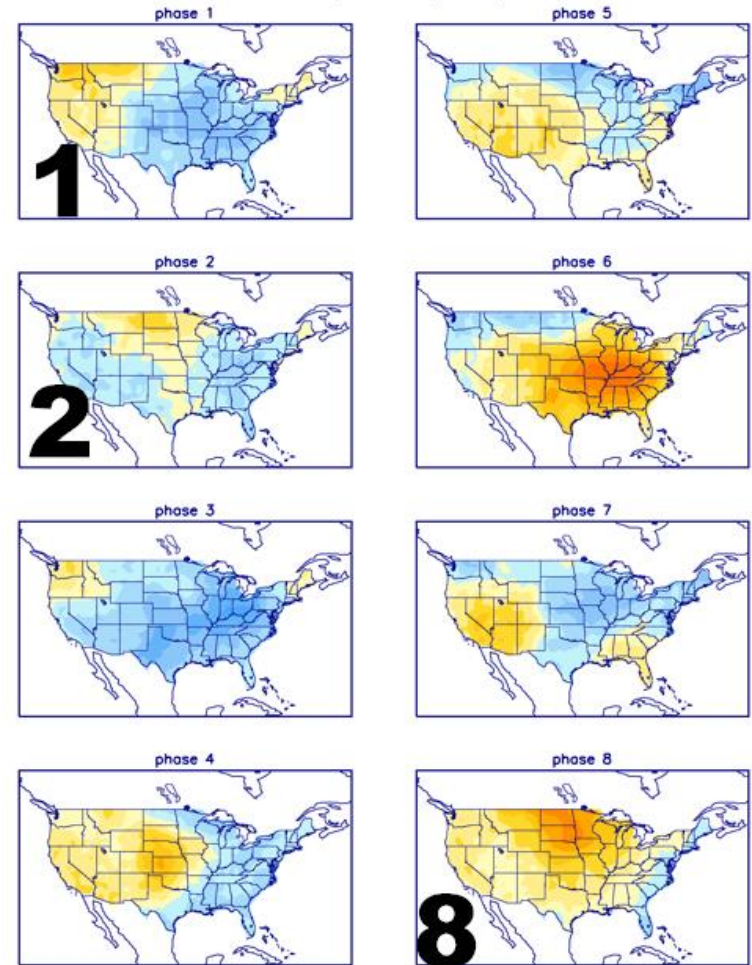


# Phase 1 and 2 are COLD ... But notice THE GREEN – above Normal precip over heart of the HRWW in Phase 1 and 2

P composites (MAM)

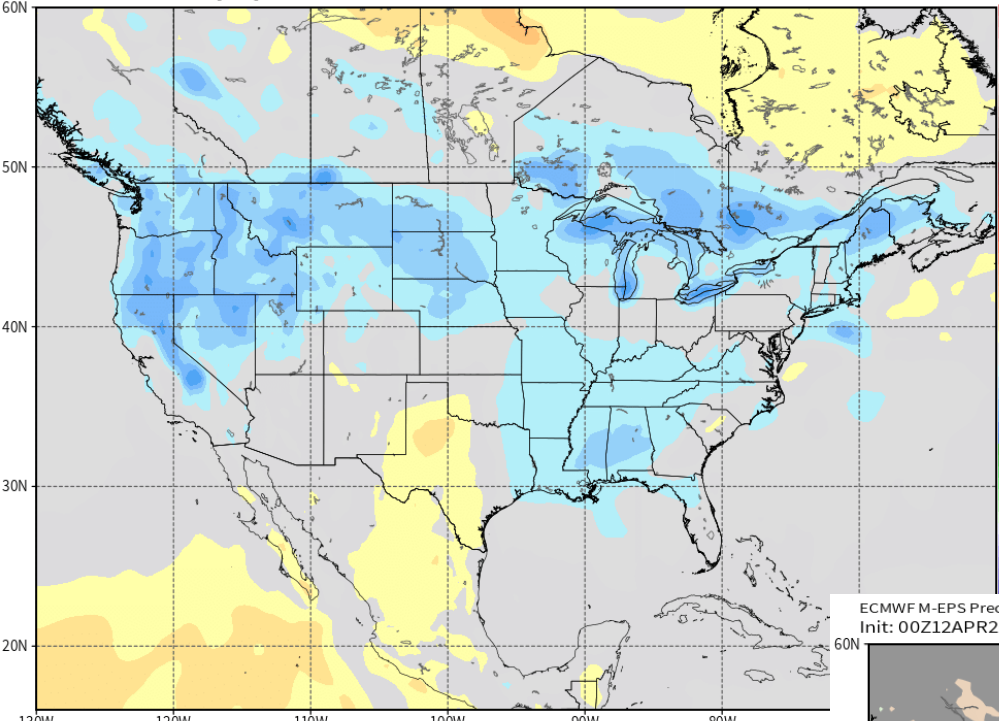


T composites (MAM)



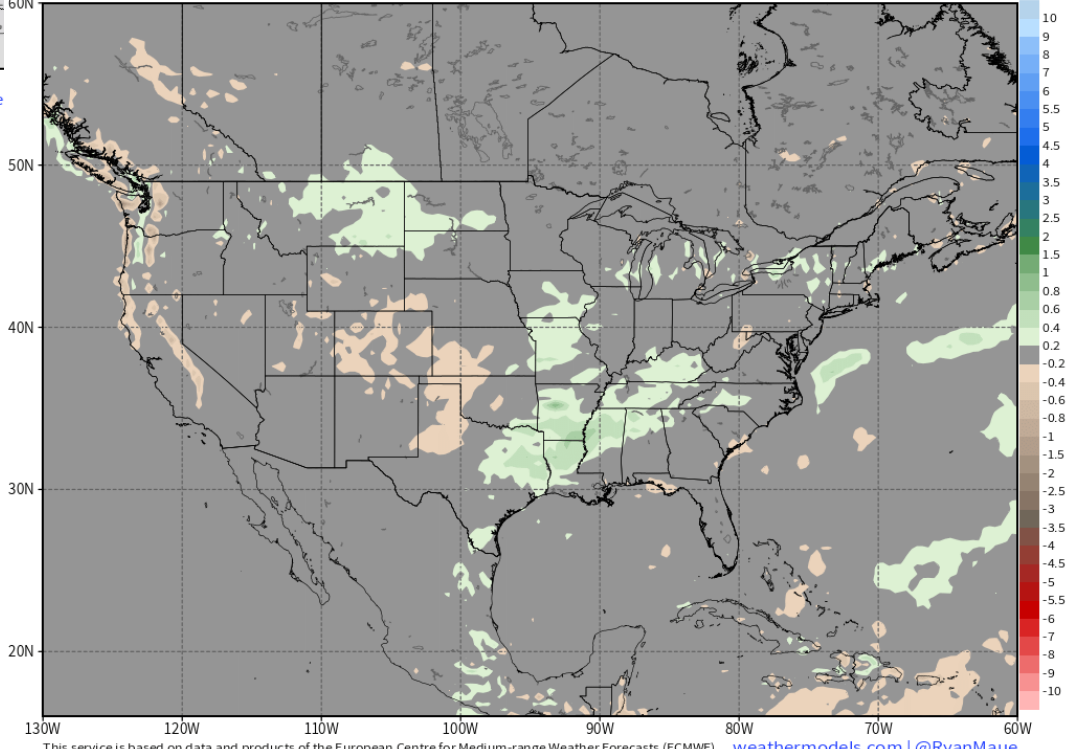
ECMWF M-EPS 2-meter Temperature Anomaly [°C] | 7-day Ensemble Mean 00Z26APR2018 & 00Z03MAY2018  
Init: 00Z12APR2018 -- [504] hr --> Valid Thu 00Z03MAY2018

Day 14 - Day 21  
MIN|MAX: -3.8° | 2.2°C



ECMWF M-EPS Precipitation Anomaly [inch] | 7-day Ensemble Mean 00Z26APR2018 & 00Z03MAY2018  
Init: 00Z12APR2018 -- [504] hr --> Valid Thu 00Z03MAY2018

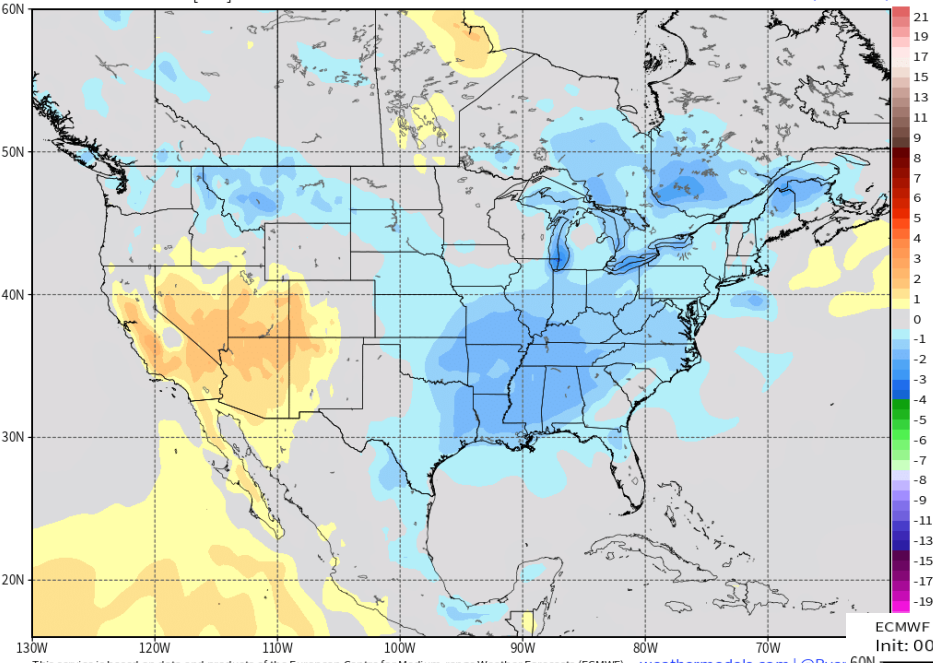
Day 14 - Day 21  
MIN|MAX: -2.07 | 1.34 INCH



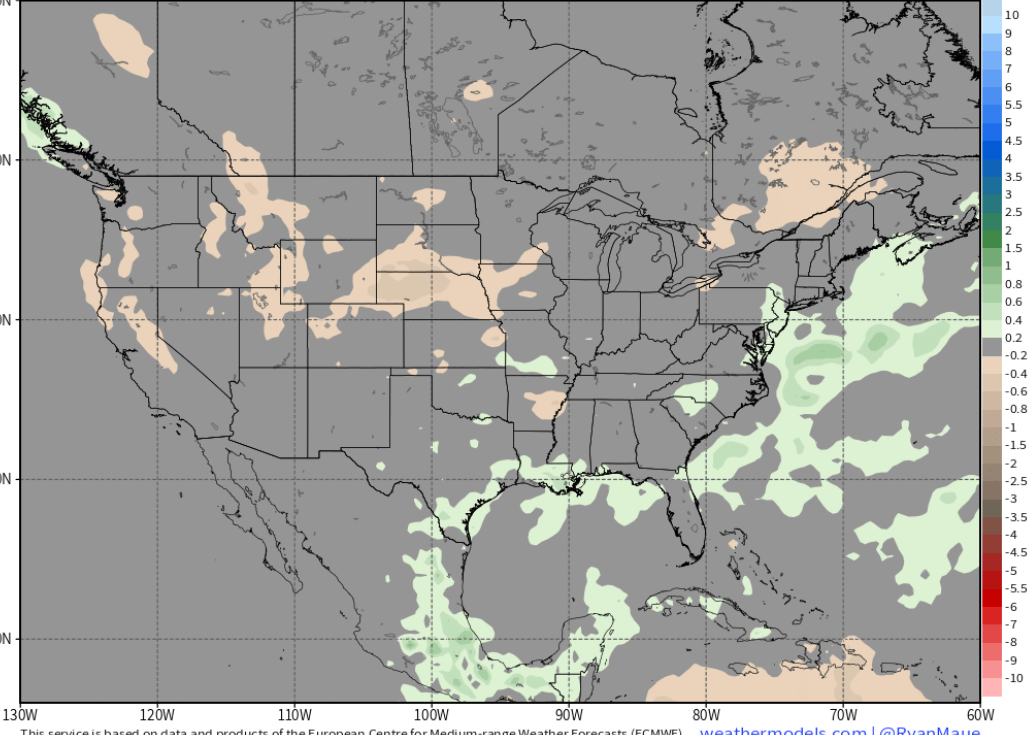
This service is based on data and products of the European Centre for Medium-range Weather Forecasts (ECMWF) [weathermode](#)

This service is based on data and products of the European Centre for Medium-range Weather Forecasts (ECMWF) [weathermodels.com](#) | @RyanMaue

ECMWF M-EPS 2-meter Temperature Anomaly [°C] | 7-day Ensemble Mean 00Z03MAY2018 & 00Z10MAY2018  
Init: 00Z12APR2018 -- [672] hr --> Valid Thu 00Z10MAY2018

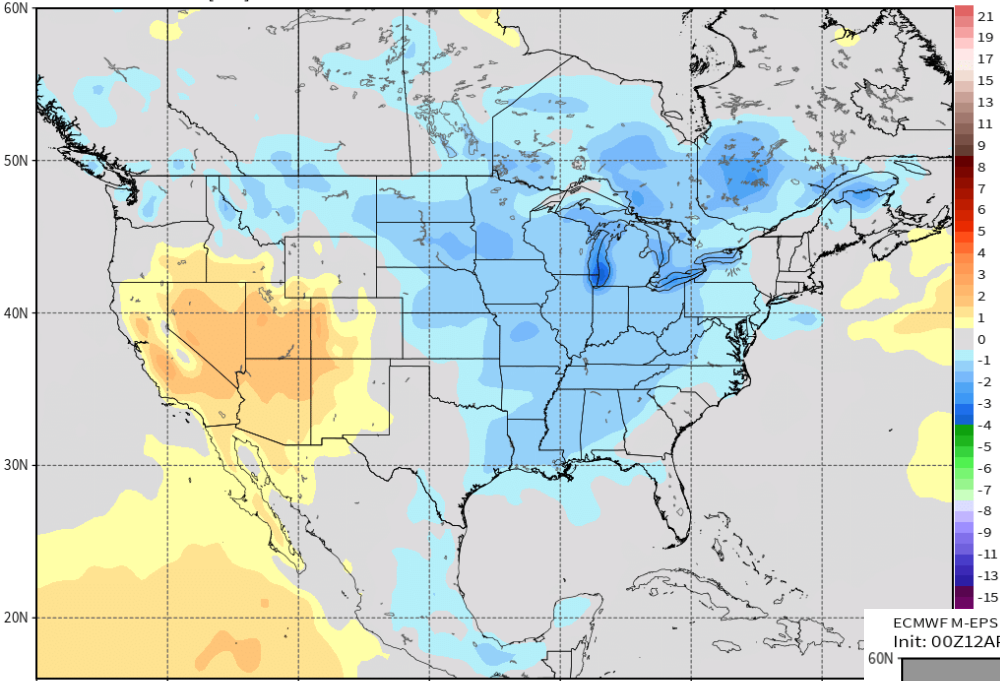


ECMWF M-EPS Precipitation Anomaly [Inch] | 7-day Ensemble Mean 00Z04MAY2018 & 00Z11MAY2018  
Init: 00Z12APR2018 -- [696] hr --> Valid Fri 00Z11MAY2018



ECMWF M-EPS 2-meter Temperature Anomaly [°C] | 7-day Ensemble Mean 00Z10MAY2018 & 00Z17MAY2018  
Init: 00Z12APR2018 -- [840] hr --> Valid Thu 00Z17MAY2018

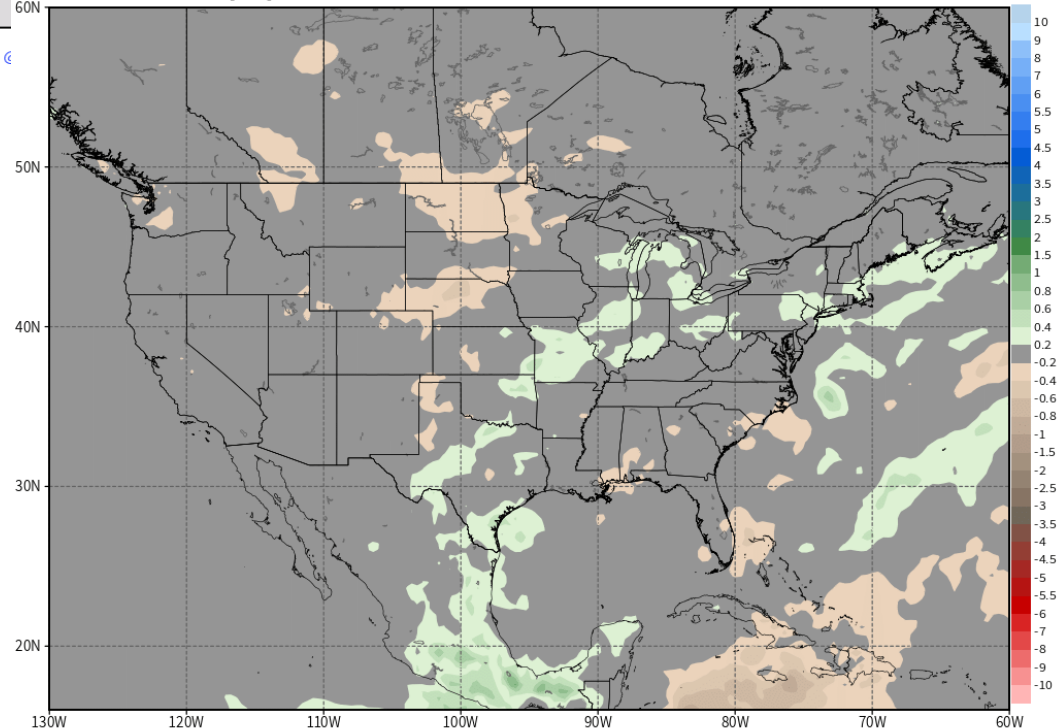
Day 28 - Day 35  
MIN|MAX: -4.4° | 2.9°C



This service is based on data and products of the European Centre for Medium-range Weather Forecasts (ECMWF) [weathermodels.com](http://weathermodels.com) | ©

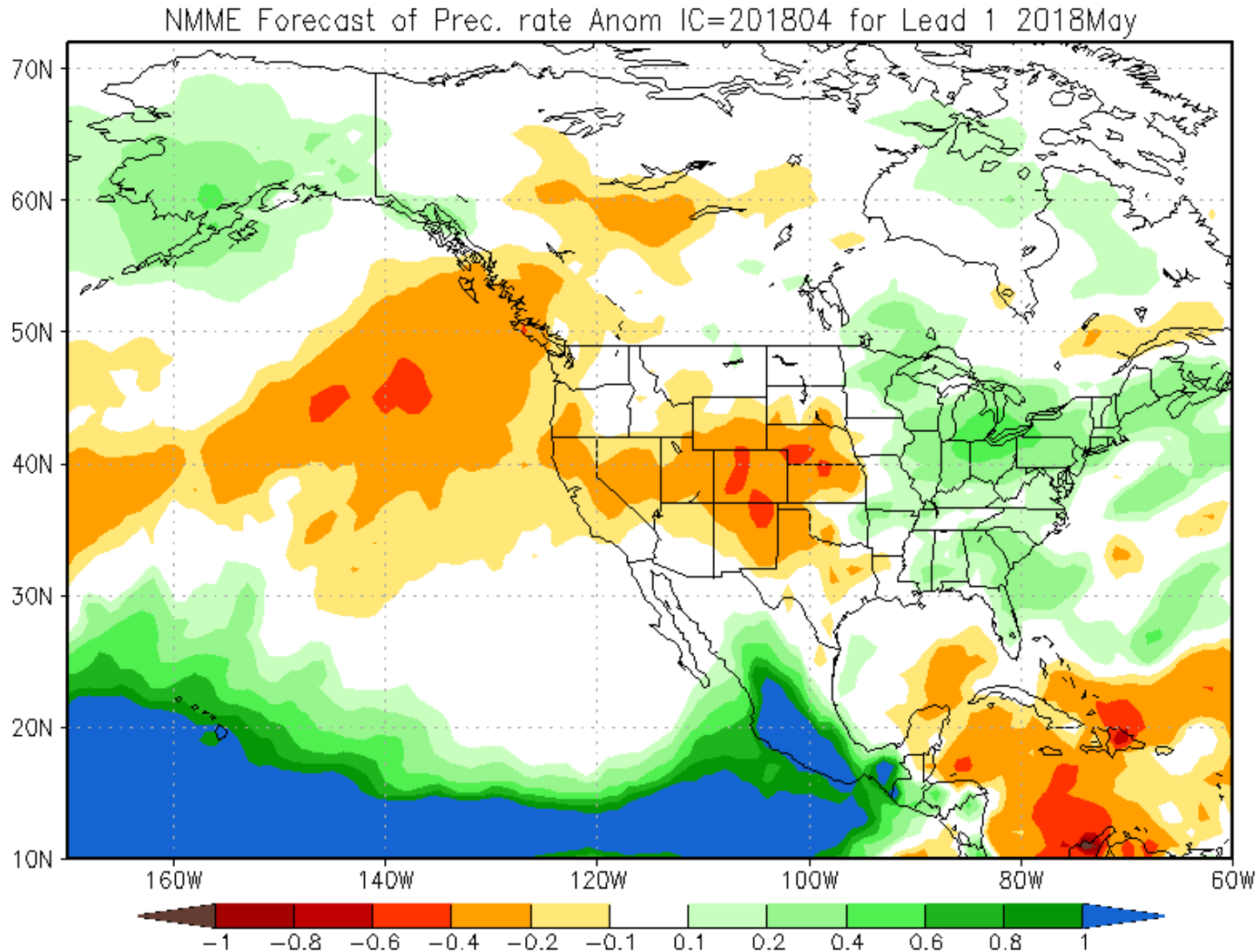
ECMWF M-EPS Precipitation Anomaly [inch] | 7-day Ensemble Mean 00Z10MAY2018 & 00Z17MAY2018  
Init: 00Z12APR2018 -- [840] hr --> Valid Thu 00Z17MAY2018

Day 28 - Day 35  
MIN|MAX: -0.94 | 1.07 INCH

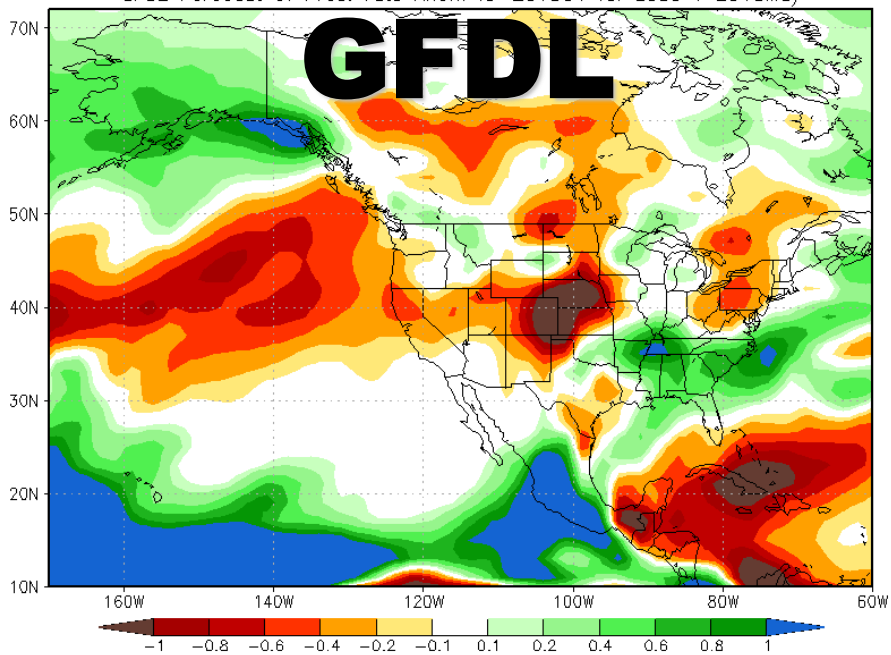


This service is based on data and products of the European Centre for Medium-range Weather Forecasts (ECMWF) [weathermodels.com](http://weathermodels.com) | @RyanMaue

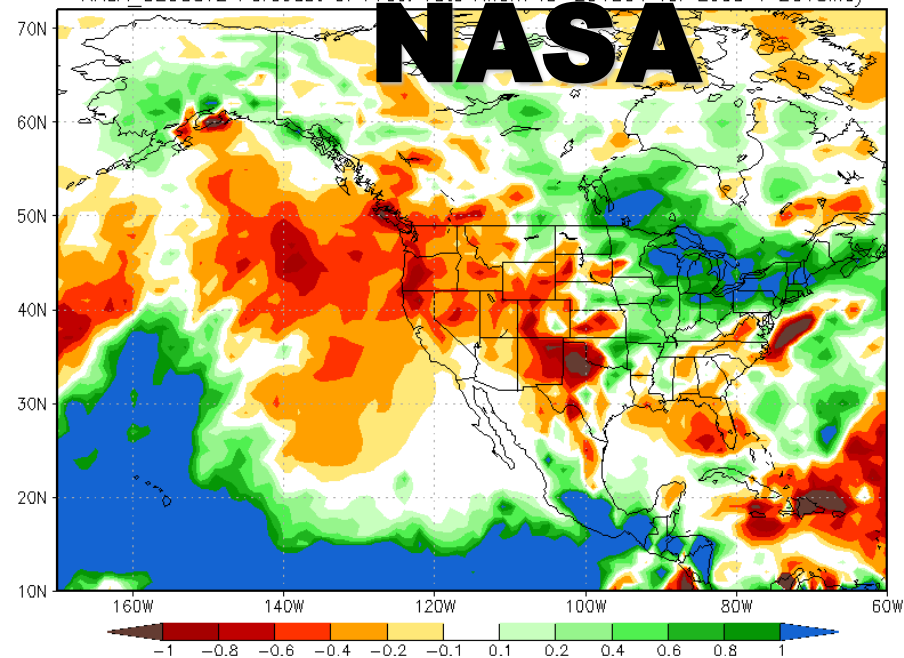
**NMME – sum of all CLIMATE MODELS as of APRIL 5. This is RAINFALL FOR MAY 2015**  
note its **DRY** over HRWW into central Rockies and Great Basin **WET** over ECB/ se states



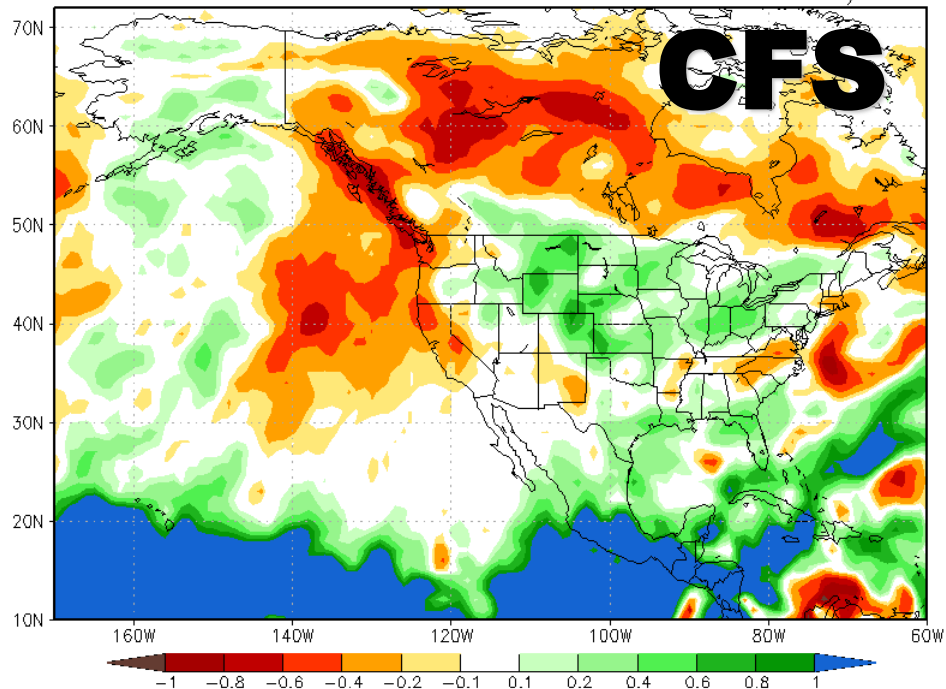
GFDL Forecast of Prec. rate Anom IC=201804 for Lead 1 2018May



NASA\_GEOS5v2 Forecast of Prec. rate Anom IC=201804 for Lead 1 2018May

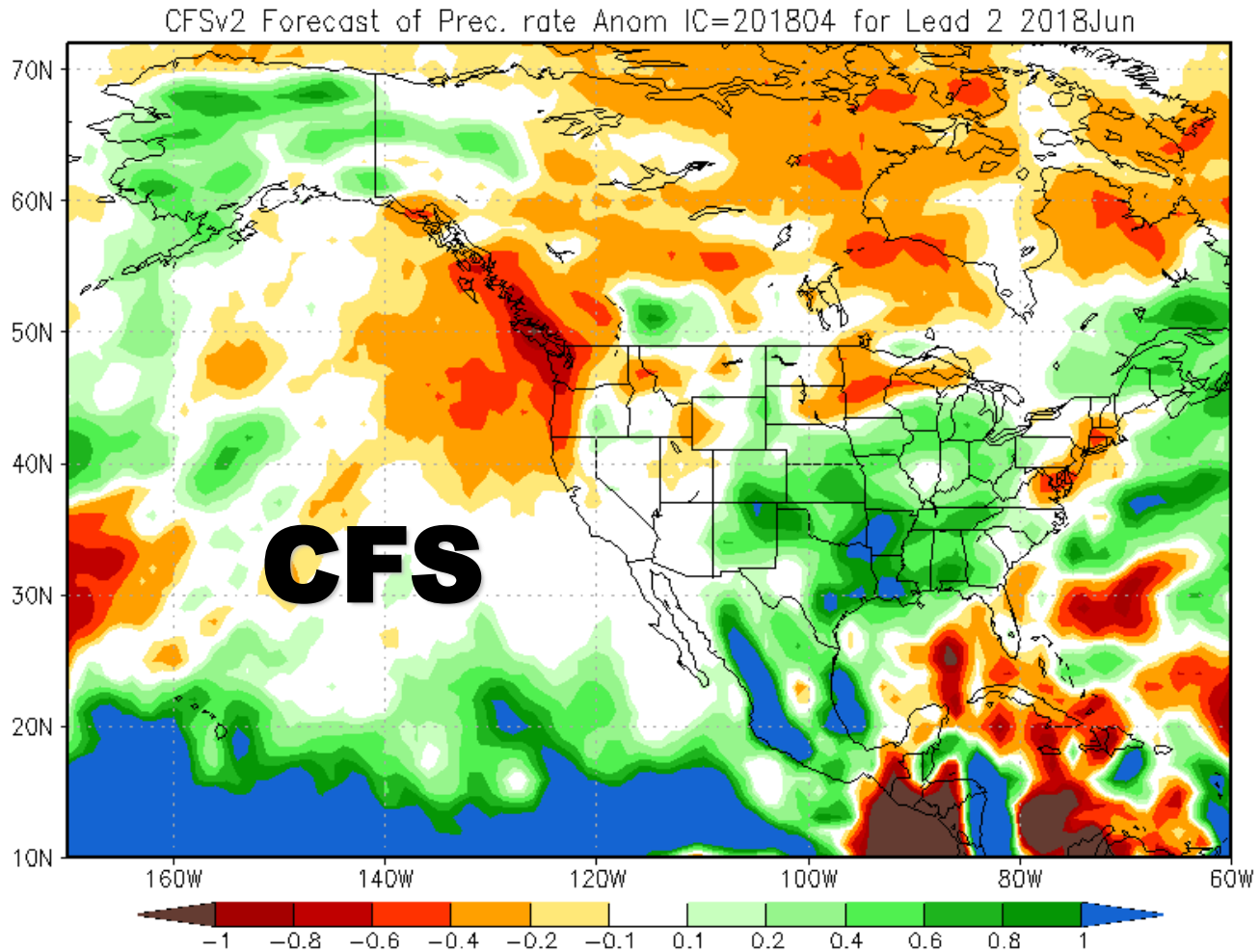


CFSv2 Forecast of Prec. rate Anom IC=201804 for Lead 1 2018May



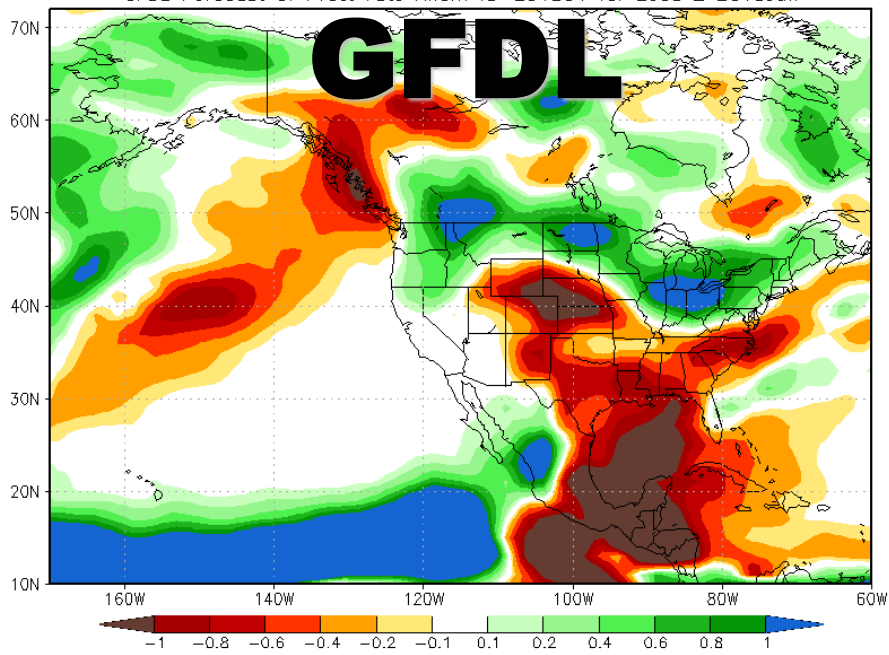
**KEY POINT - CFS model for MAY is MUCH wetter over all of Plains & WCB than any other model**

# CFS model for JUNE RAINFALL – again this climate model is MUCH wetter over all of Plains/ Delta / Midwest than any other model

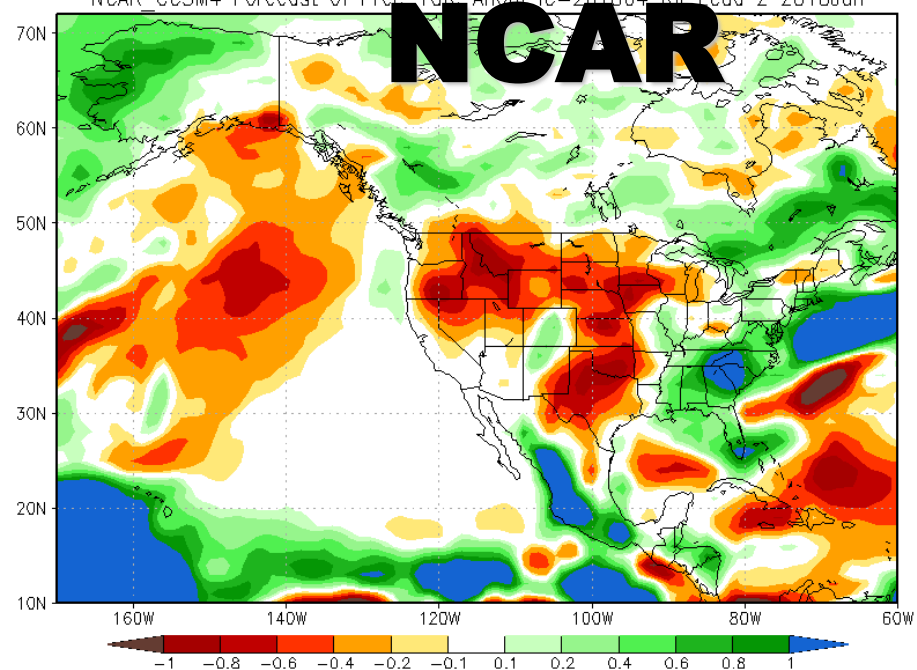




GFDL Forecast of Prec. rate Anom IC=201804 for Lead 2 2018Jun



NCAR CCSM4 Forecast of Prec. rate Anom IC=201804 for Lead 2 2018Jun



NMME Forecast of Prec. rate Anom IC=201804 for Lead 2 2018Jun

