



Weather Forecasting For
Traders, Investors, and Businesses

US HRWW GRAIN WEATHER ISSUES

as of FRIDAY
23 FEBRUARY 2018



LOCATED in Richmond VA

Featured frequently on AGRI-MONEY

EMAIL WXRISK@VERZION .NET



@WXRISK.COM



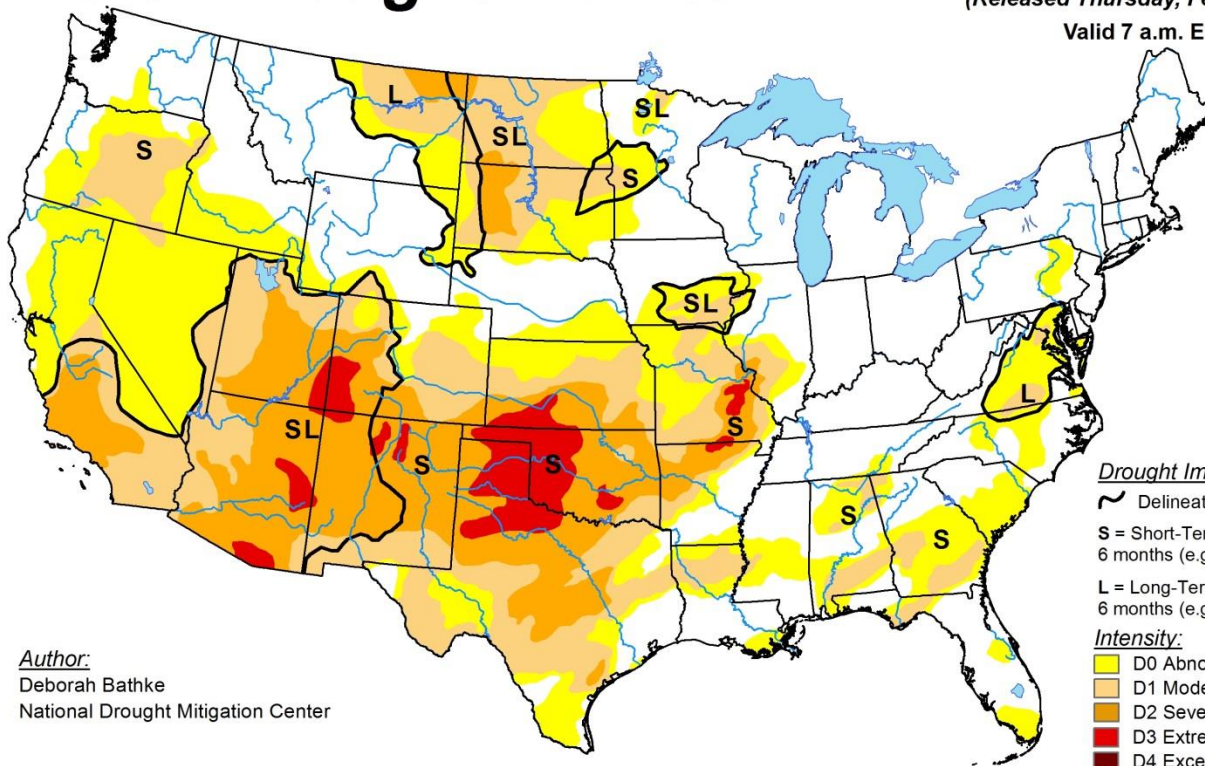
<https://www.facebook.com/WxRisk>

wxrisk@gmail.com

MAJOR INCREASES IN D3 D4 OVER TX and OK PANHANDLES into SW KS

U.S. Drought Monitor

February 20, 2018
 (Released Thursday, Feb. 22, 2018)
 Valid 7 a.m. EST



Author:
 Deborah Bathke
 National Drought Mitigation Center

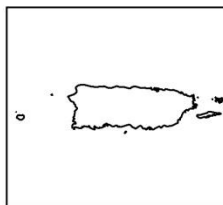
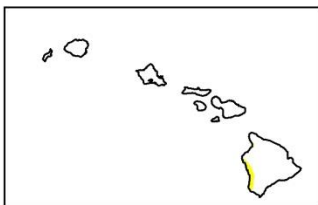
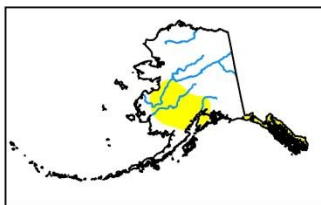
Drought Impact Types:

- ~ Delineates dominant impacts
- S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
- L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

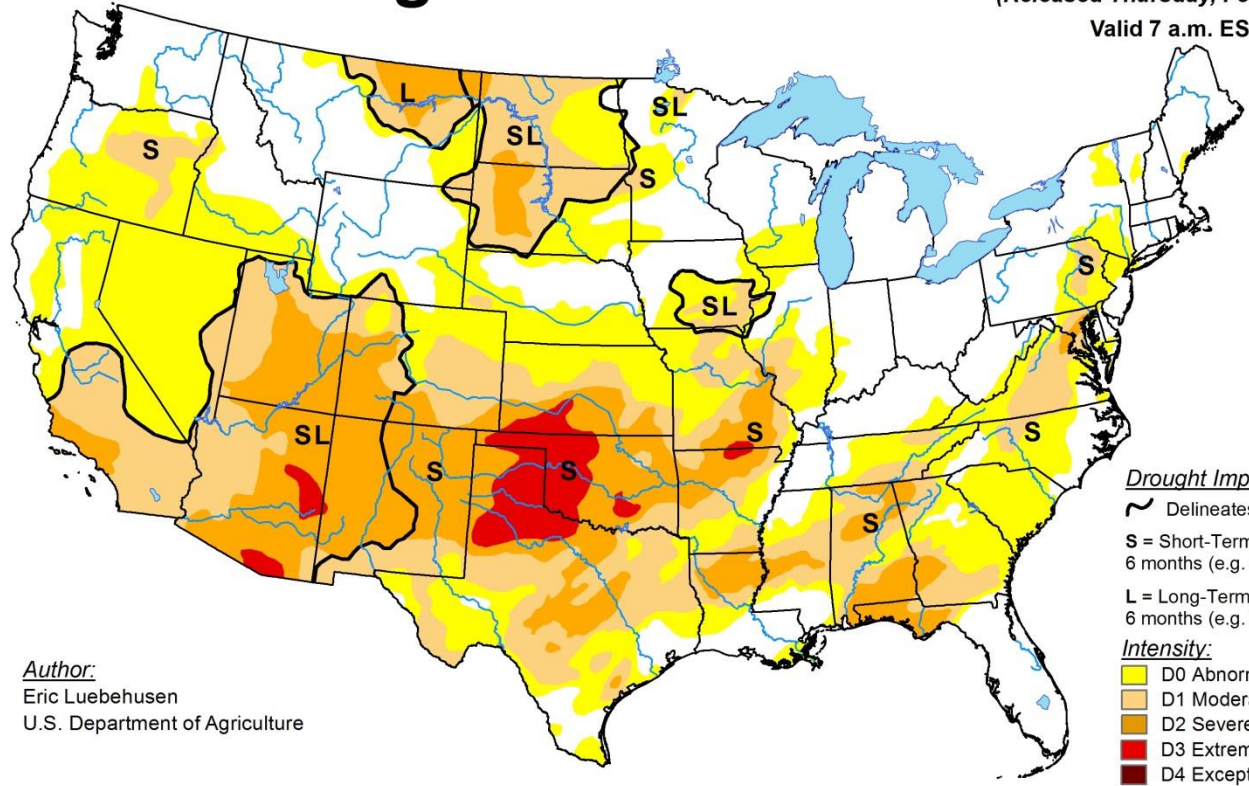


<http://droughtmonitor.unl.edu/>

2 WEEKS AGO

U.S. Drought Monitor

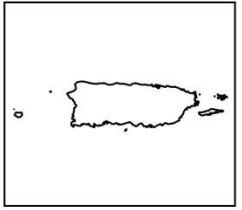
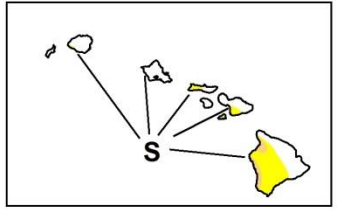
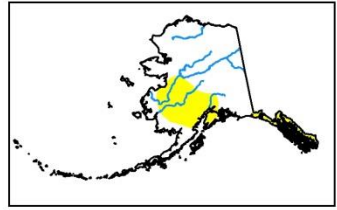
February 6, 2018
 (Released Thursday, Feb. 8, 2018)
 Valid 7 a.m. EST



Author:
 Eric Luebehusen
 U.S. Department of Agriculture

- Drought Impact Types:
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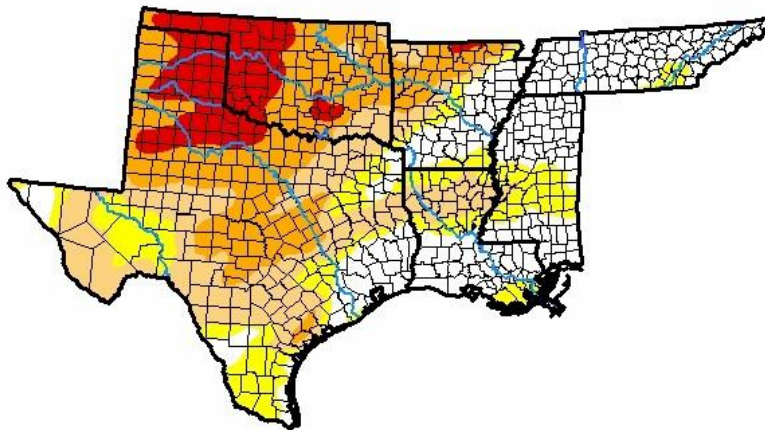


<http://droughtmonitor.unl.edu/>

% OF AREA IN ANY DROUGHT D0-D4 = 11/21/17 was 41% but as of 2/20/18 = 85%

% OF AREA IN SERIOUS DROUGHT D2-D4 = 11/21/17 was 3% but as of 2/20/18 = 33%

**U.S. Drought Monitor
South**



February 20, 2018
(Released Thursday, Feb. 22, 2018)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	28.44	71.56	55.73	33.47	10.85	0.00
Last Week <i>02-13-2018</i>	25.51	74.49	56.69	33.77	11.88	0.00
3 Months Ago <i>11-21-2017</i>	38.90	61.10	29.21	9.39	0.00	0.00
Start of Calendar Year <i>01-02-2018</i>	31.09	68.91	42.64	15.33	0.30	0.00
Start of Water Year <i>09-26-2017</i>	72.17	27.83	2.38	0.02	0.00	0.00
One Year Ago <i>02-21-2017</i>	65.18	34.82	16.94	6.57	0.24	0.00

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

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National Drought Mitigation Center

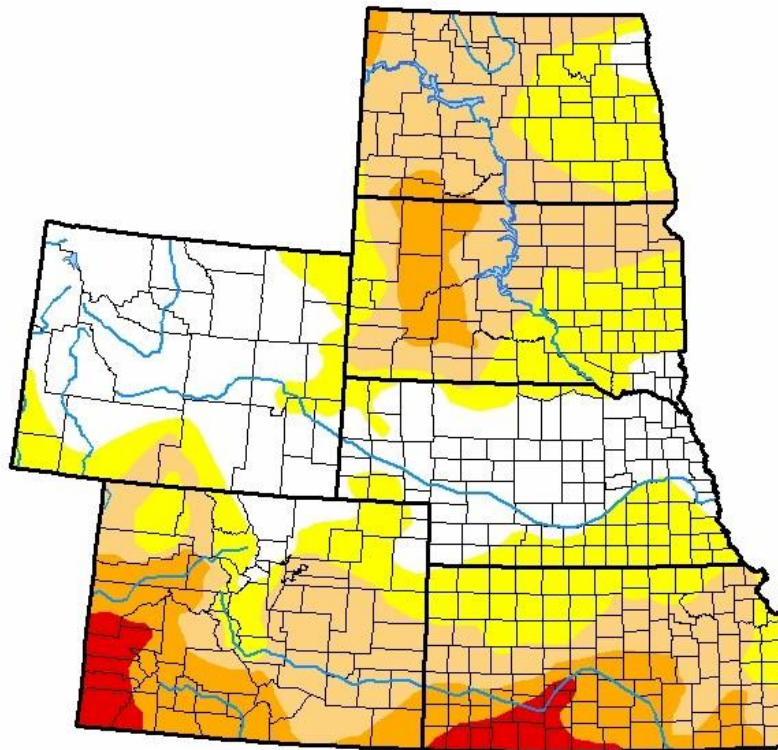


<http://droughtmonitor.unl.edu/>

% OF AREA IN ANY DROUGHT D0-D4 = 11/21/17 was 38% but as of 2/20/18 = 72%
% OF AREA IN SERIOUS DROUGHT D2-D4 = 11/21/17 was 3% but as of 2/20/18 = 15%

**U.S. Drought Monitor
High Plains**

February 20, 2018
 (Released Thursday, Feb. 22, 2018)
 Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	28.39	71.61	44.47	15.76	3.09	0.00
Last Week <i>02-13-2018</i>	28.98	71.02	42.85	15.76	1.53	0.00
3 Months Ago <i>11-21-2017</i>	62.30	37.70	15.45	3.26	0.90	0.00
Start of Calendar Year <i>01-02-2018</i>	19.28	80.72	29.19	6.34	0.90	0.00
Start of Water Year <i>09-26-2017</i>	56.15	43.85	21.11	8.37	1.32	0.06
One Year Ago <i>02-21-2017</i>	63.26	36.74	18.95	1.41	0.00	0.00

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

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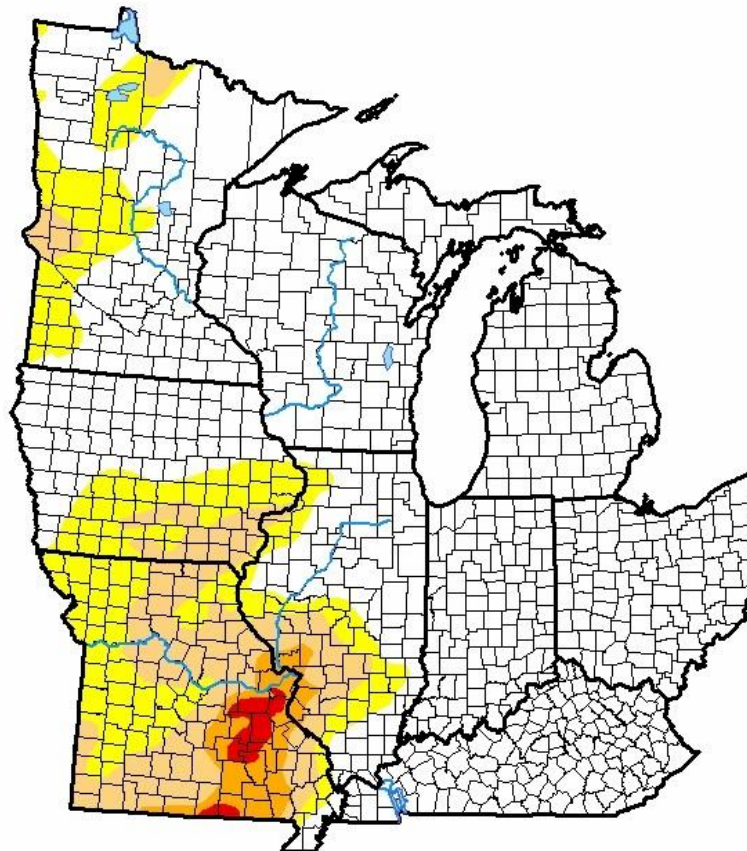


% OF AREA IN ANY DROUGHT D0-D4 = 11/22/17 was 172% but as of 2/20/18 = 27%

% OF AREA IN SERIOUS DROUGHT D2-D4 = 11/22/17 was 2% but as of 2/20/18 = 3%

**U.S. Drought Monitor
Midwest**

February 20, 2018
(Released Thursday, Feb. 22, 2018)
Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	72.44	27.56	13.00	3.24	0.72	0.00
Last Week <i>02-13-2018</i>	66.88	33.12	14.42	4.05	0.78	0.00
3 Months Ago <i>11-21-2017</i>	82.08	17.92	6.98	2.40	0.00	0.00
Start of Calendar Year <i>01-02-2018</i>	69.93	30.07	9.46	3.44	0.18	0.00
Start of Water Year <i>09-26-2017</i>	58.41	41.59	8.86	0.77	0.25	0.00
One Year Ago <i>02-21-2017</i>	78.42	21.58	7.25	0.00	0.00	0.00

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

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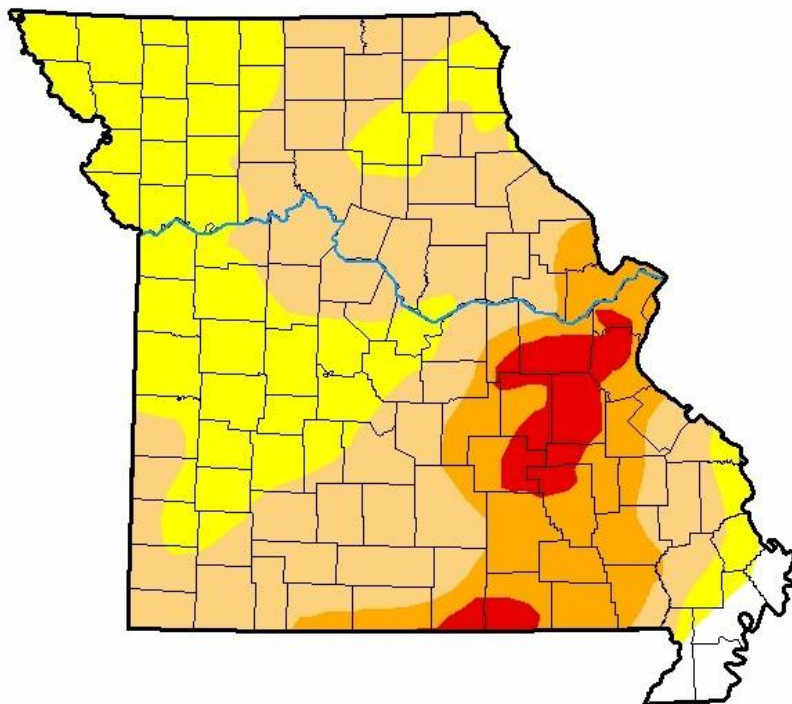


% OF AREA IN ANY DROUGHT D0-D4 = 11/21/17 was 73% but as of 2/20/18 = 99%

% OF AREA IN SERIOUS DROUGHT D2-D4 = 11/21/17 was 19% but as of 2/20/18 = 29%

**U.S. Drought Monitor
Missouri**

February 20, 2018
(Released Thursday, Feb. 22, 2018)
Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	2.65	97.35	63.23	20.23	5.15	0.00
Last Week <i>02-13-2018</i>	1.45	98.55	63.22	26.02	5.59	0.00
3 Months Ago <i>11-21-2017</i>	27.00	73.00	39.61	16.64	0.00	0.00
Start of Calendar Year <i>01-02-2018</i>	1.49	98.51	46.34	23.68	1.29	0.00
Start of Water Year <i>09-26-2017</i>	35.49	64.51	8.80	0.00	0.00	0.00
One Year Ago <i>02-21-2017</i>	4.47	95.53	49.57	0.00	0.00	0.00

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

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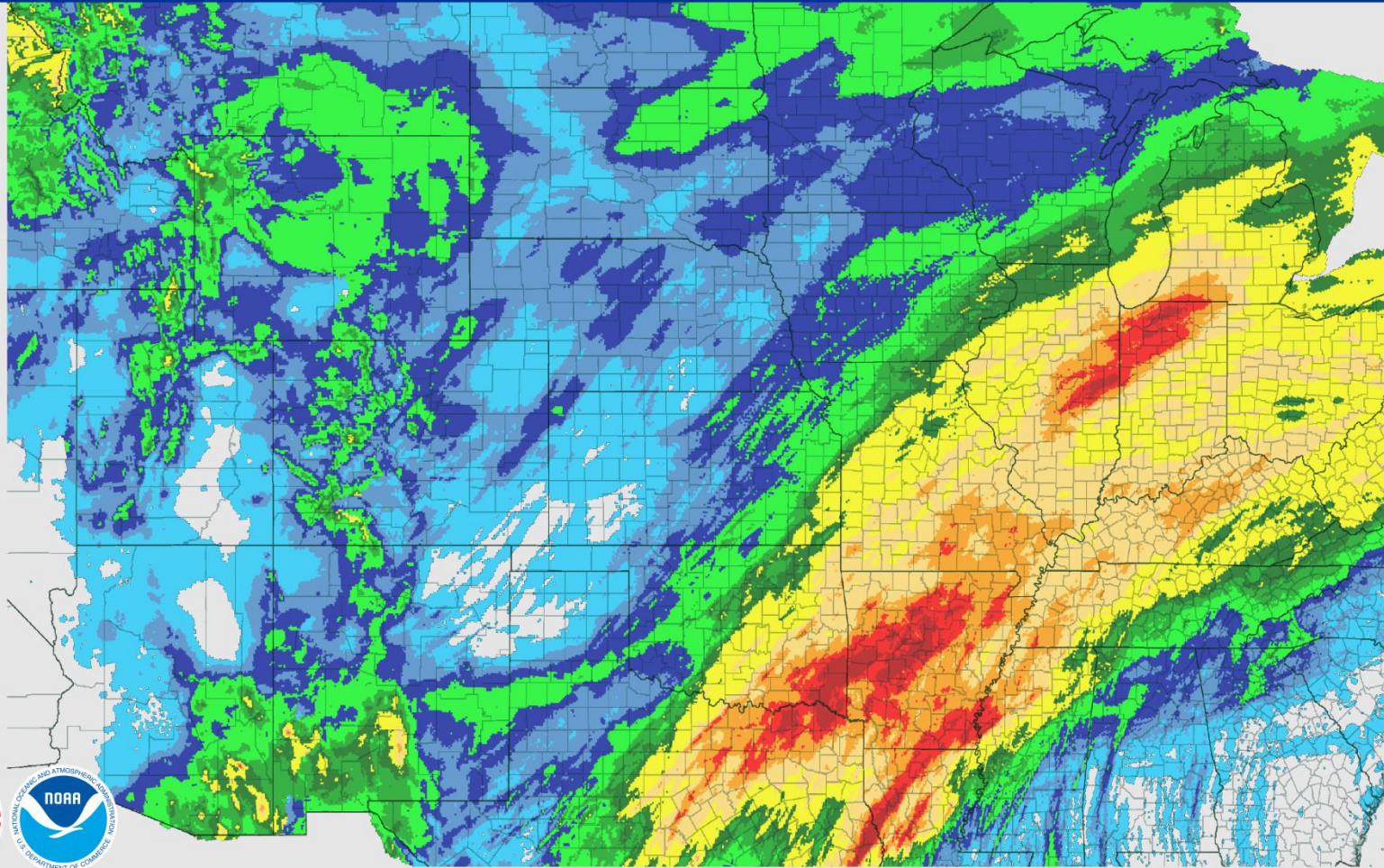


ACTUAL PRECIP PAST 7 DAYS

February 22, 2018 7-Day Observed Precipitation

Created on: February 23, 2018 - 05:35 UTC

Valid on: February 22, 2018 12:00 UTC

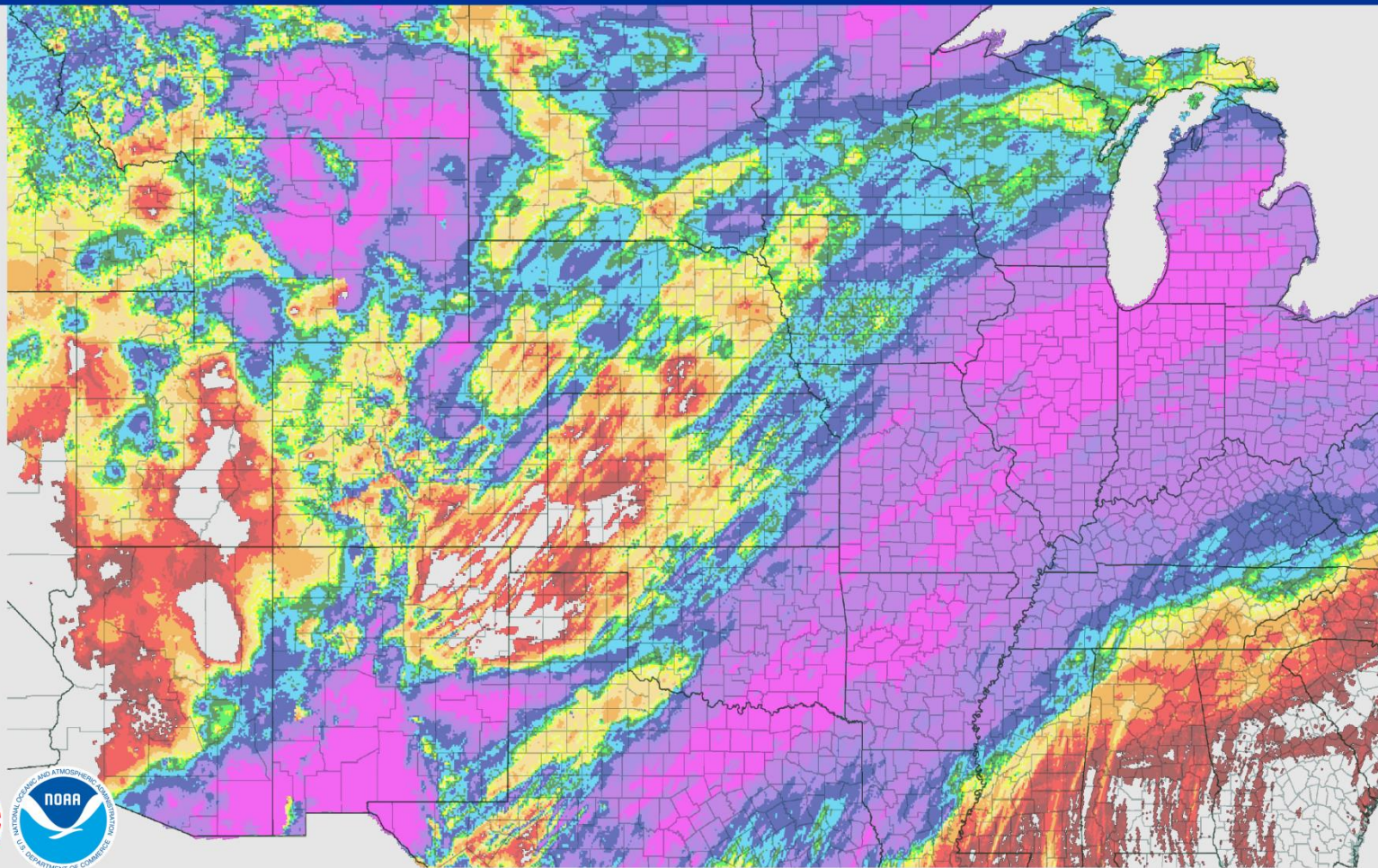


PRECIP ANOMALIES PAST 7 DAYS

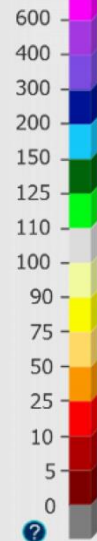
February 22, 2018 7-Day Percent Precipitation

Created on: February 23, 2018 - 05:41 UTC

Valid on: February 22, 2018 12:00 UTC



Percent

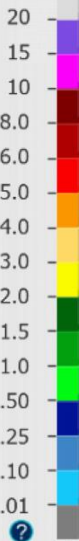
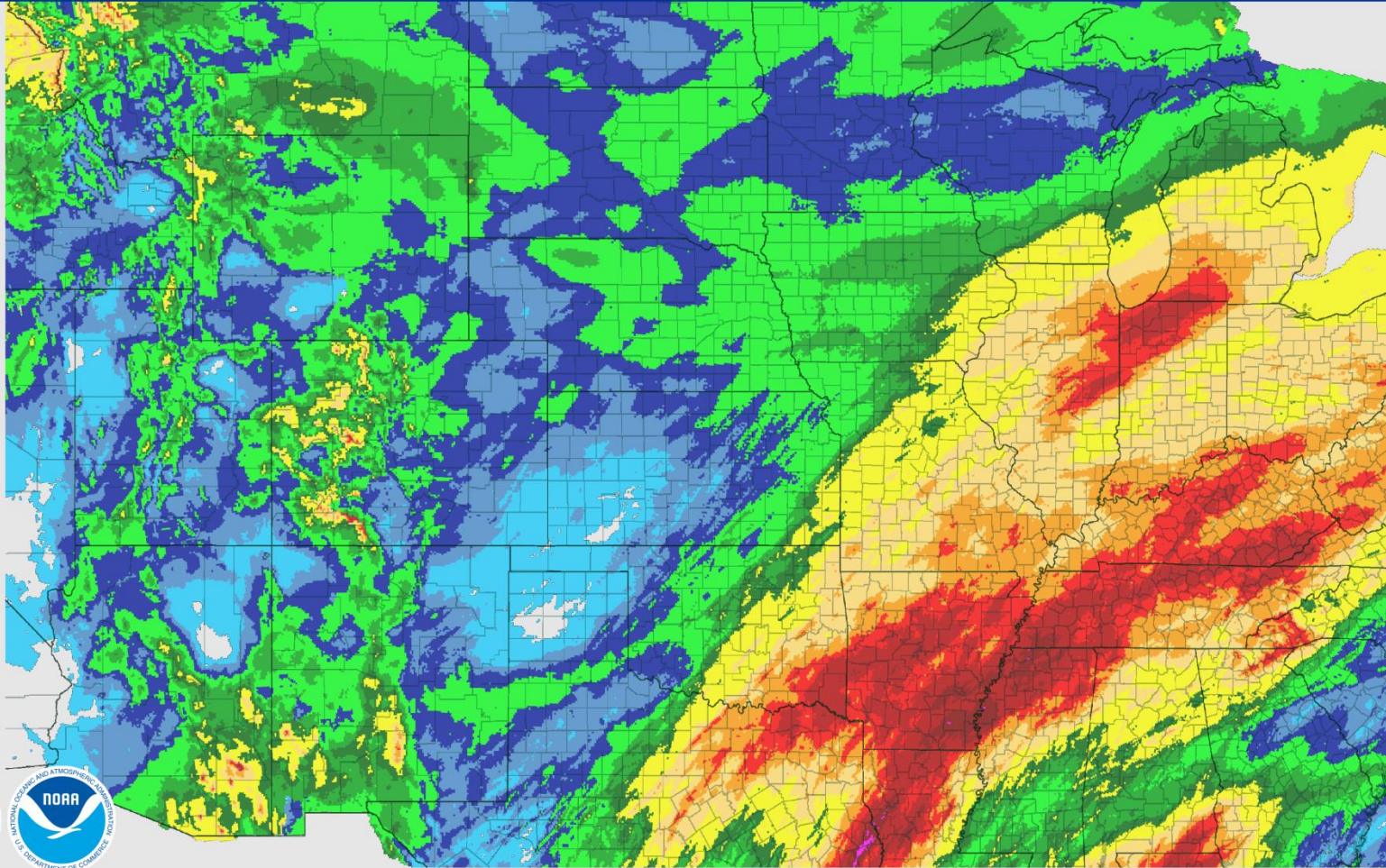


ACTUAL RAINFALL PAST 14 DAYS

February 22, 2018 14-Day Observed Precipitation

Created on: February 23, 2018 - 05:41 UTC

Valid on: February 22, 2018 12:00 UTC

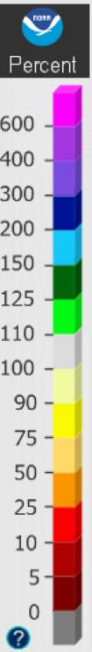
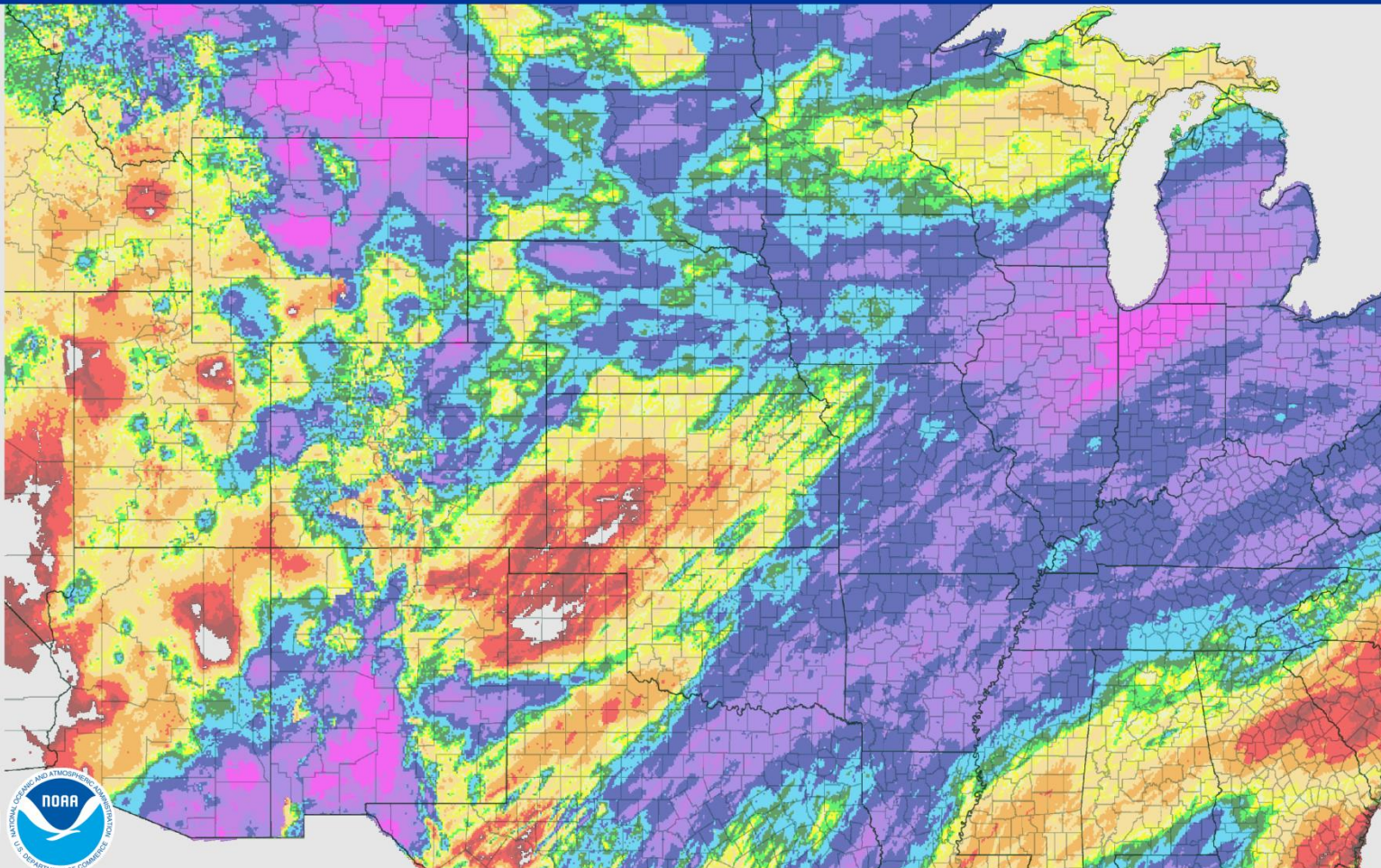


RAINFALL ANOMALIES PAST 14 DAYS

February 22, 2018 14-Day Percent Precipitation

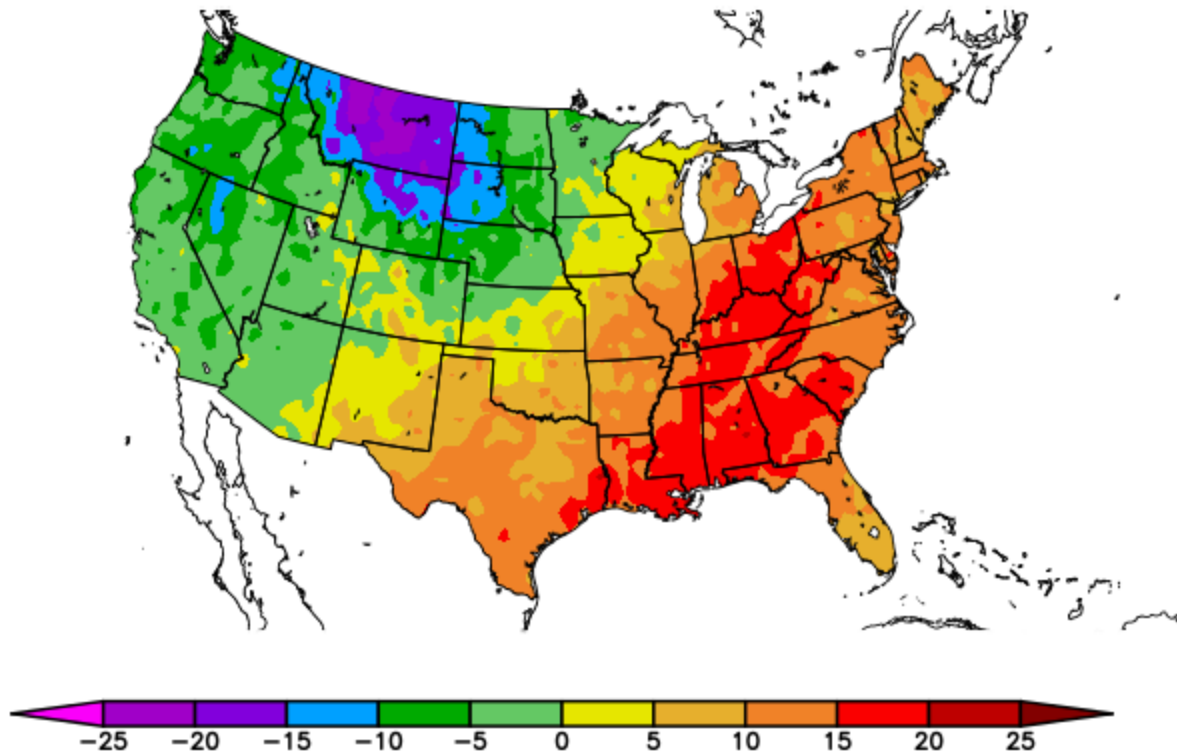
Created on: February 23, 2018 - 05:42 UTC

Valid on: February 22, 2018 12:00 UTC



TEMP ANOMALIES PAST 7 DAYS

Departure from Normal Temperature (F)
2/15/2018 - 2/21/2018

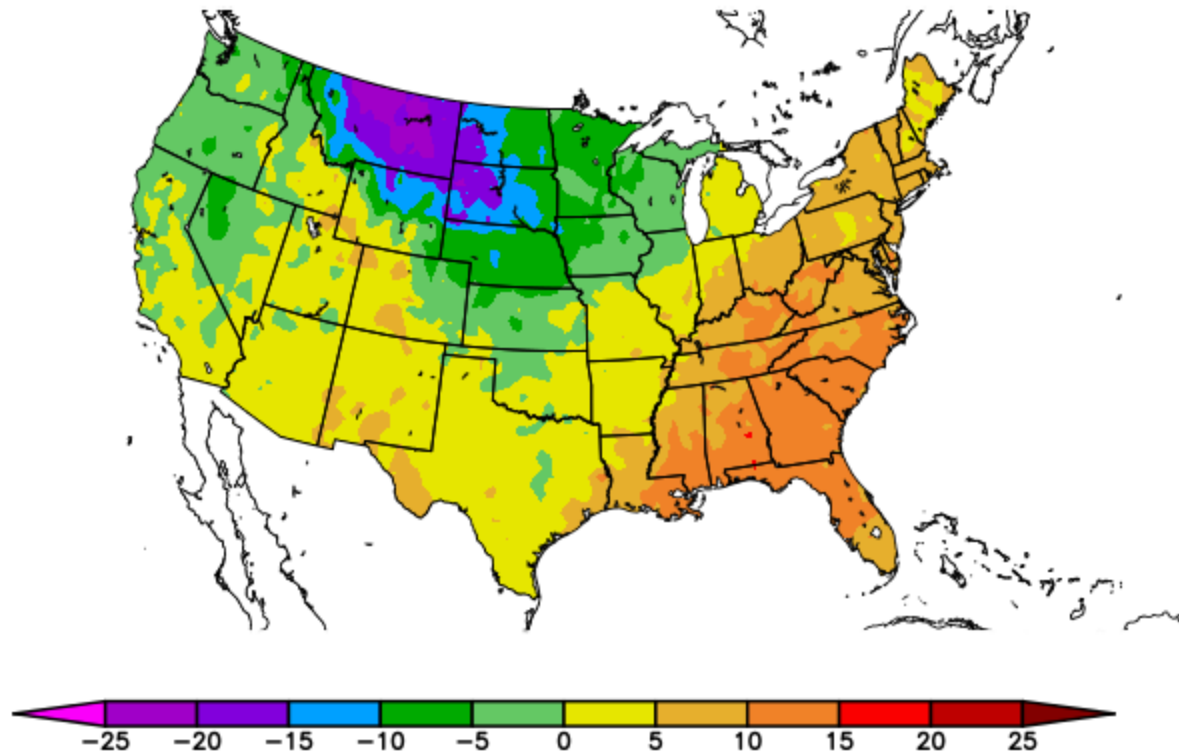


Generated 2/22/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers

PAST 14 DAYS TEMP ANOMALIES

Departure from Normal Temperature (F)
2/8/2018 - 2/21/2018



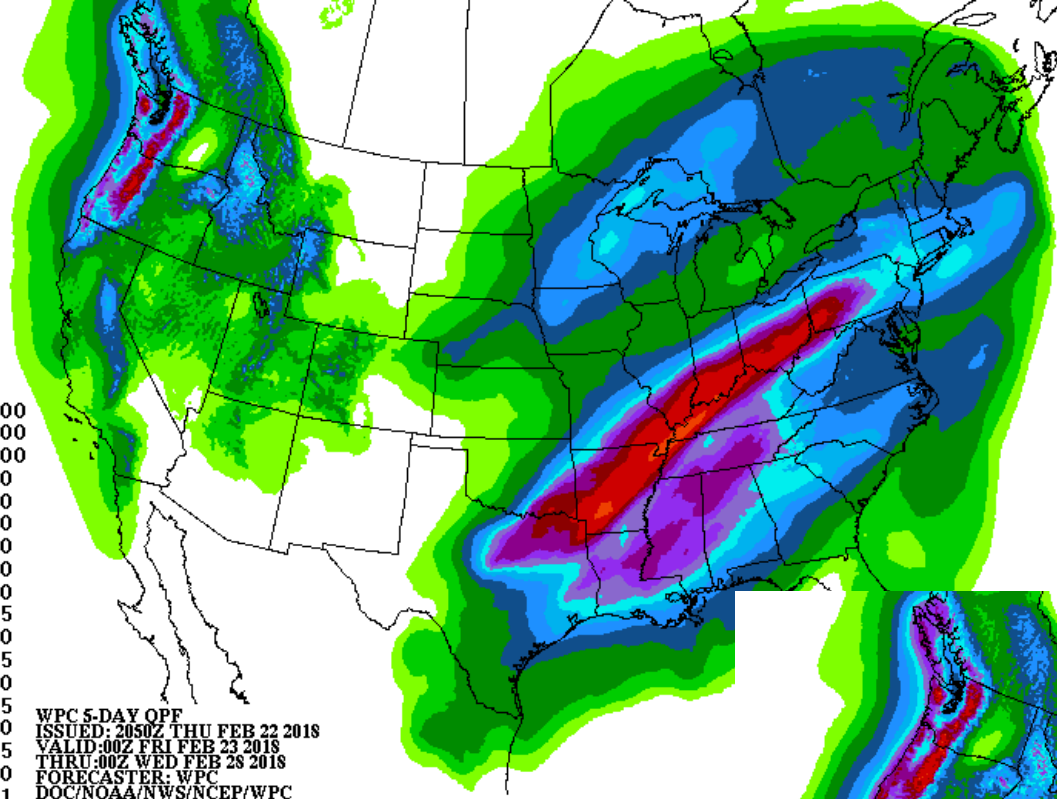
Generated 2/22/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers

NWS OFFICIAL RAINFALL 5DAYS / NEXT 7 DAYS

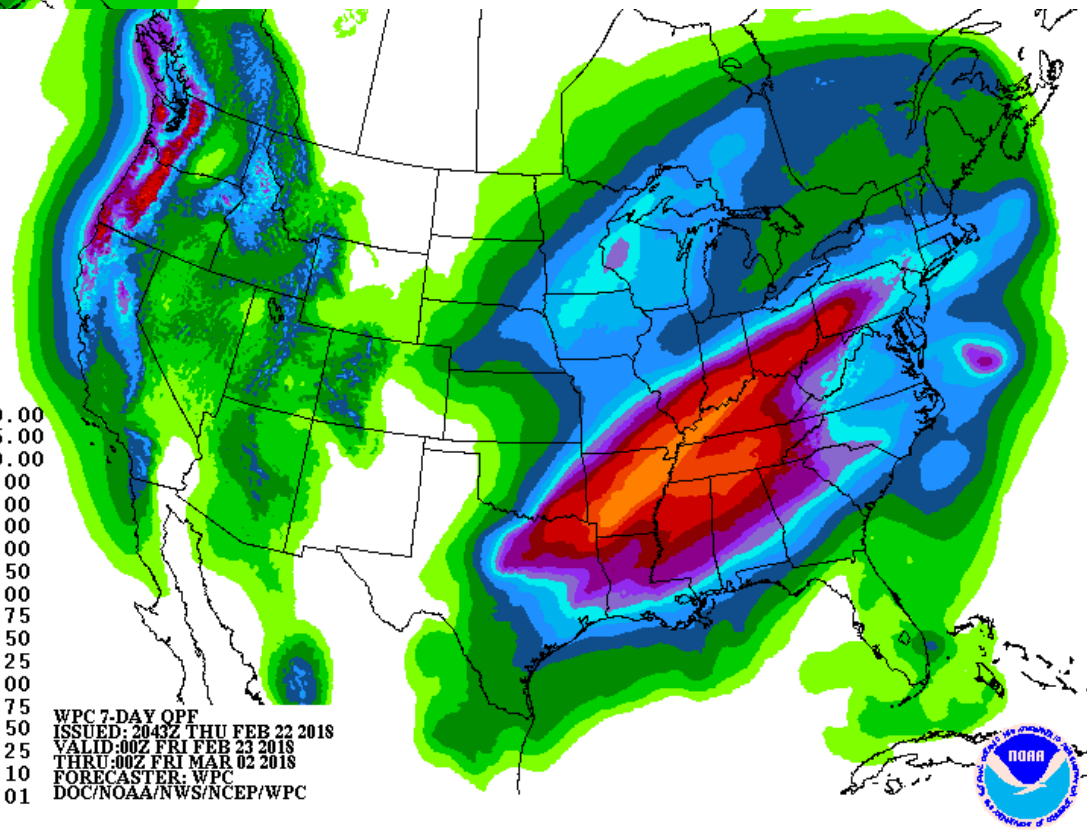
20.00
15.00
10.00
7.00
5.00
4.00
3.00
2.50
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.10
0.01

WPC 5-DAY OFF
ISSUED: 2050Z THU FEB 22 2018
VALID: 00Z FRI FEB 23 2018
THRU: 00Z WED FEB 28 2018
FORECASTER: WPC
DOC/NOAA/NWS/NCEP/WPC



20.00
15.00
10.00
7.00
5.00
4.00
3.00
2.50
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.10
0.01

WPC 7-DAY OFF
ISSUED: 2043Z THU FEB 22 2018
VALID: 00Z FRI FEB 23 2018
THRU: 00Z FRI MAR 02 2018
FORECASTER: WPC
DOC/NOAA/NWS/NCEP/WPC

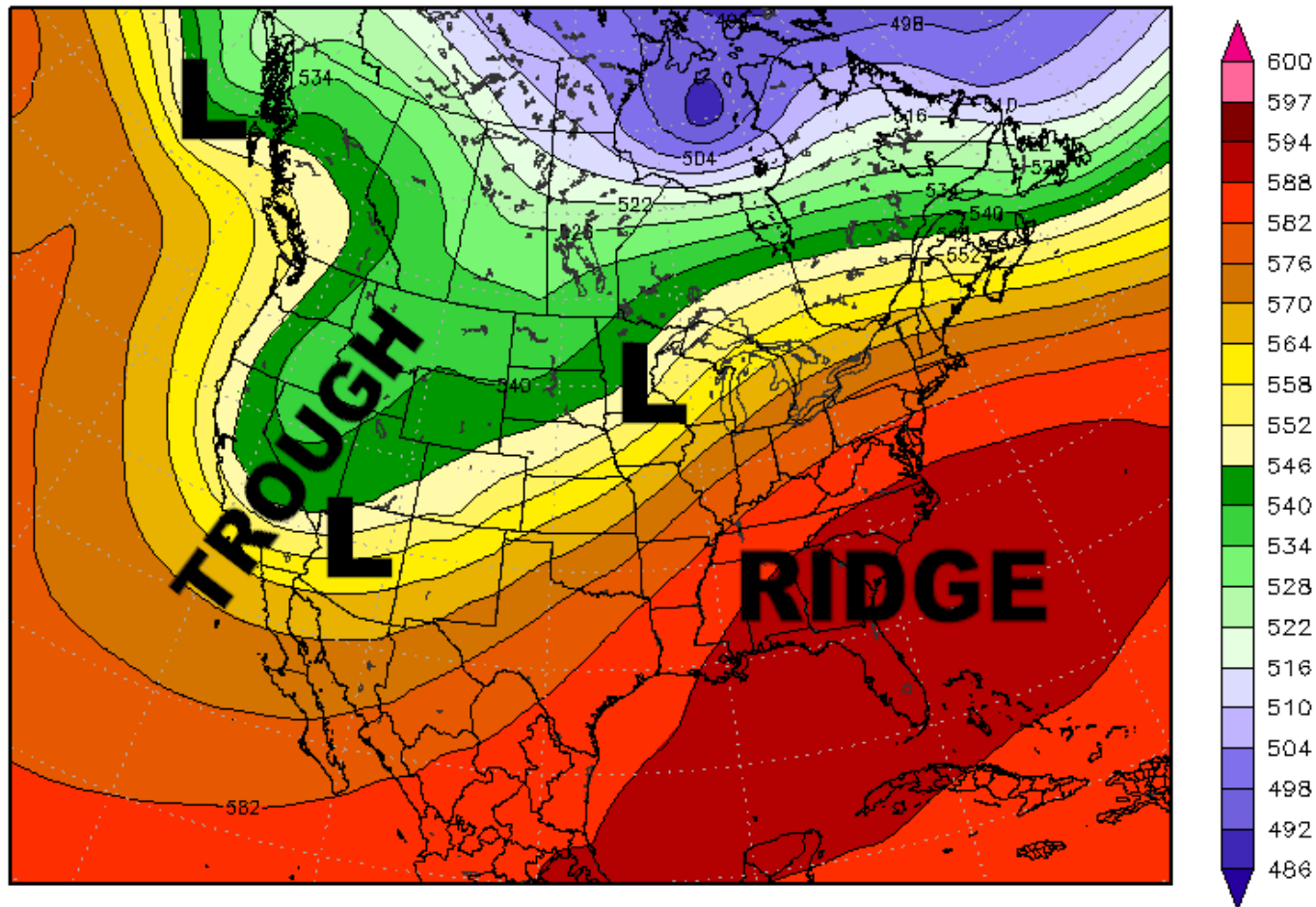


CURRENT UPPER AIR / JET STREAM MAP=

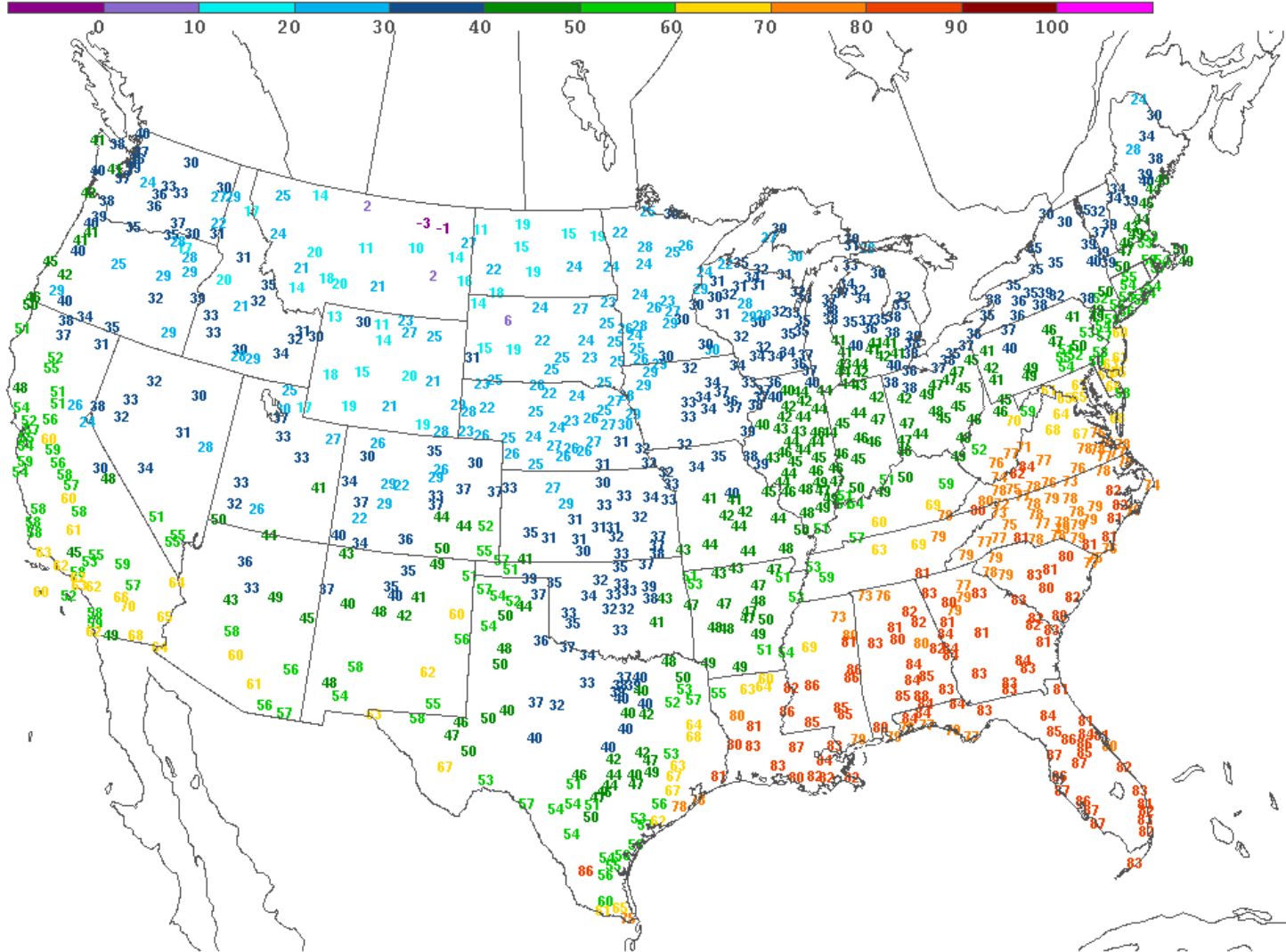
note the Deep trough over western US and strong Ridge over se states

500 mb Height
Valid: 09z Fri 23 Feb 2018

ECMWF
Hour: 9

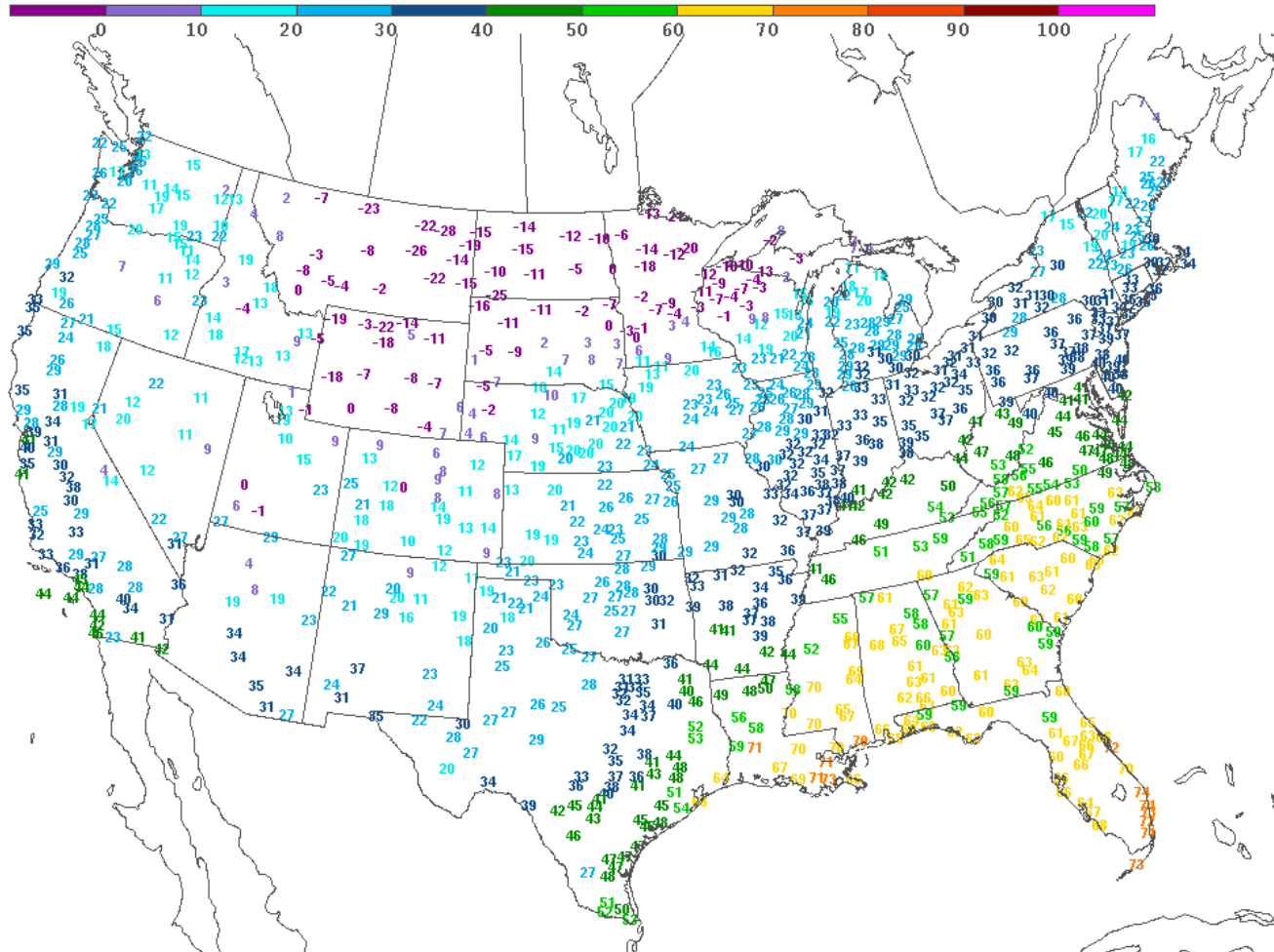


MAX TEMPS THURSDAY 2/22/18-- notice 70s 80s over se US under the Ridge... While temps stayed in the TEENS over MT ND westernSD



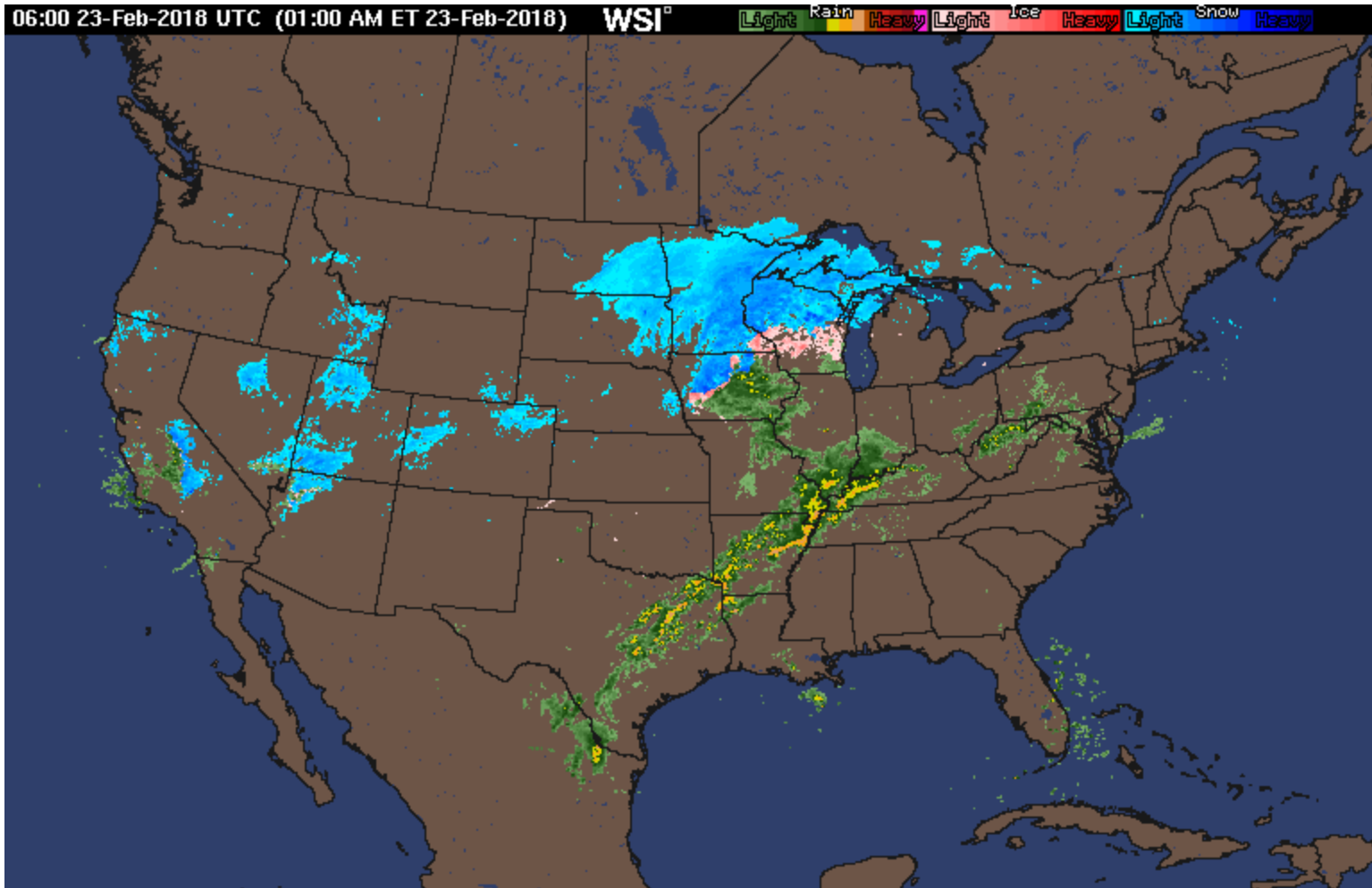
OBSERVED MAX TEMP (F) FOR THURSDAY 20180222

MIN TEMPS THURS 2/22/18 notice the -10 to -20f over WY MT ND western SD north MN... Sub zero western NEB teens rest fo NEB KS OK

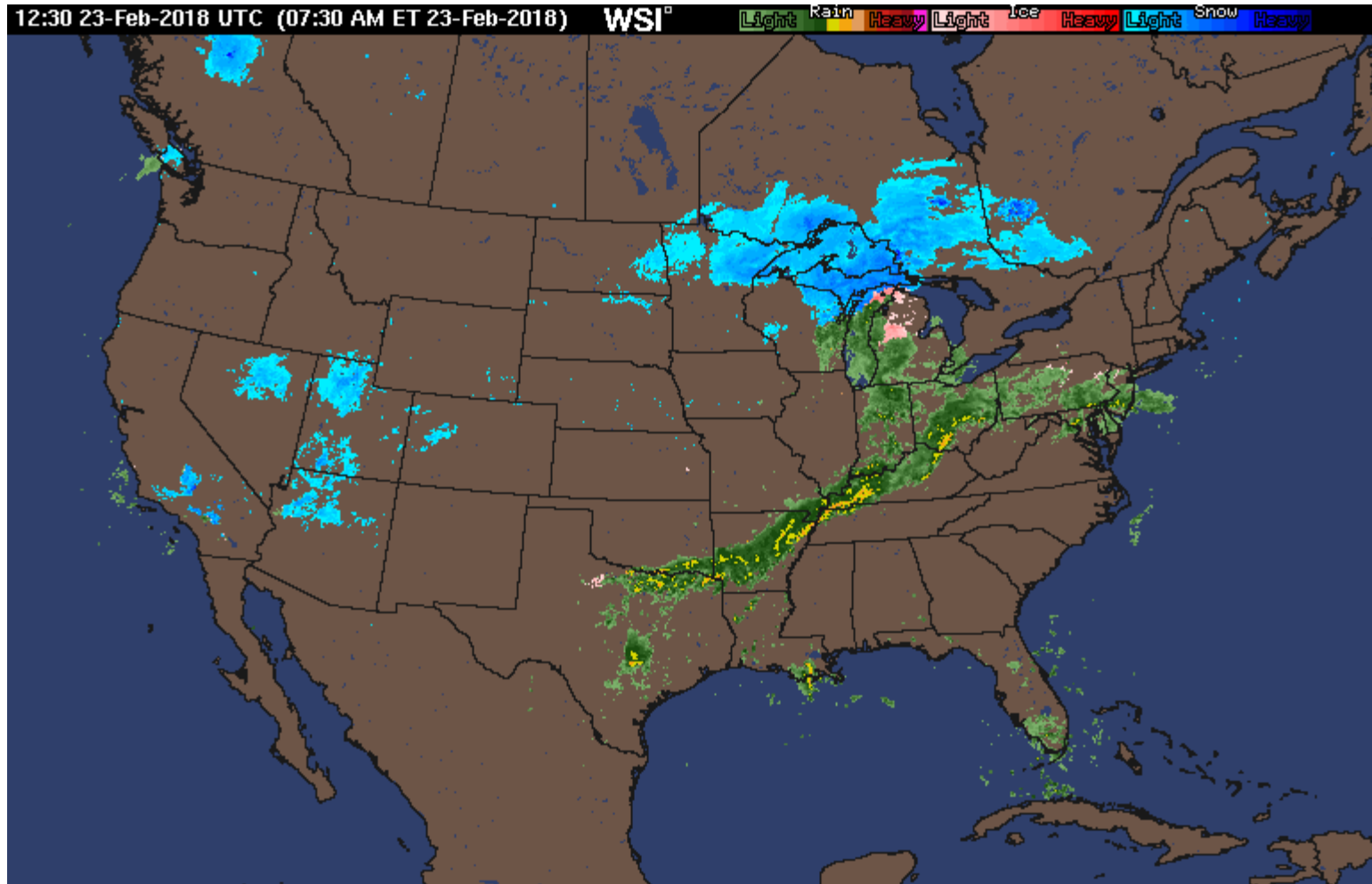


OBSERVED MIN TEMP (F) FOR THURSDAY 20180222

RADAR 1AM FRIDAY

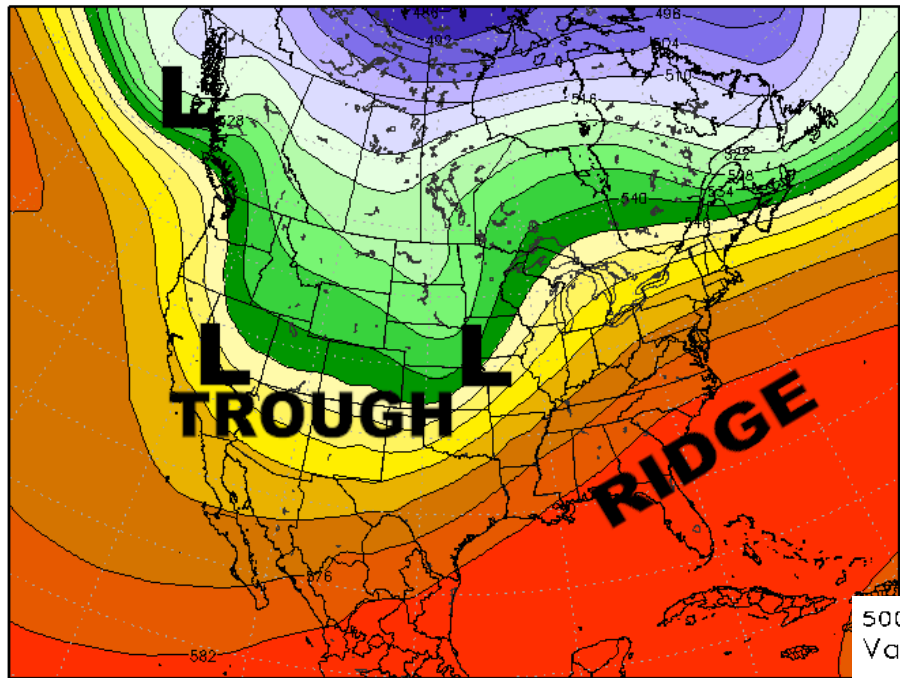


RADAR 0730 EST 1230Z FRIDAY 2/23/18



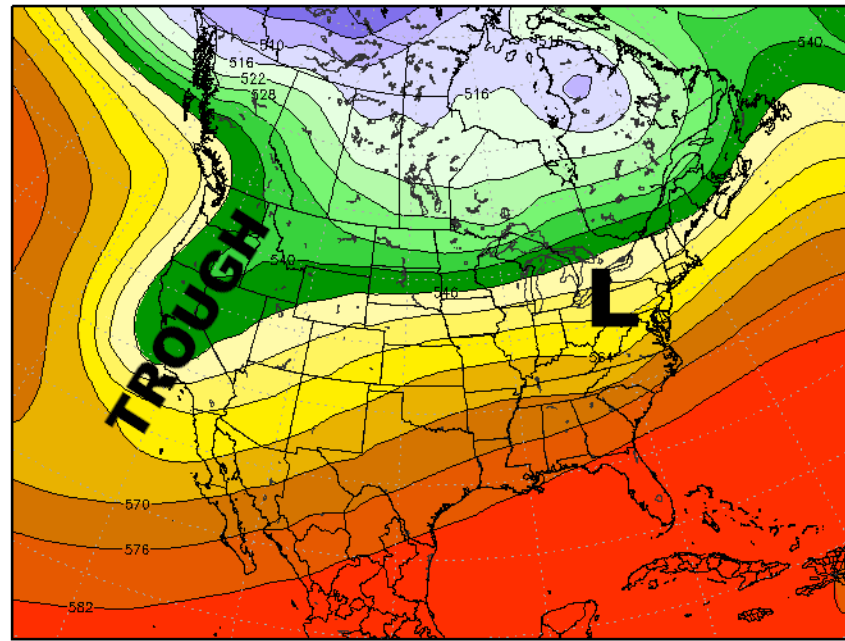
500 mb Height
Valid: 00z Sun 25 Feb 2018

ECMWF
Hour: 48



500 mb Height
Valid: 00z Tue 27 Feb 2018

ECMWF
Hour: 96



GRADS: COLA/IGES

StormVistaWxModels.com

Init: 00z

StormVistaWxModels.com

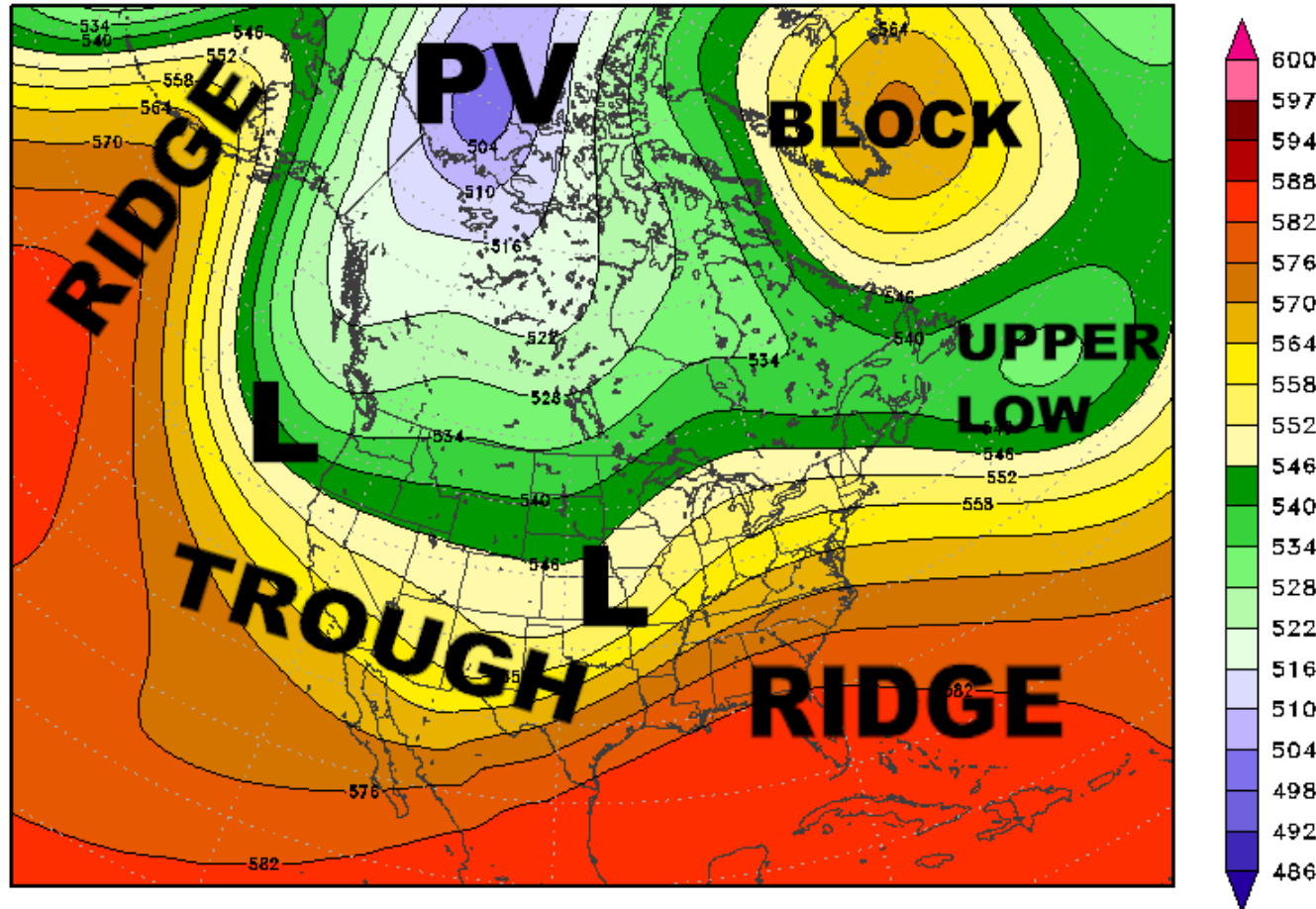
GRADS: COLA/IGES

Init: 00z Fri 23 Feb 2018
2018-02-23-01:13

DAY6... Block over GREENLAND begins to change the pattern... Deep trough over western N. America begins to come east.. Low pressure and cold fronts bring more rain to Midwest. Turing colder over Midwest

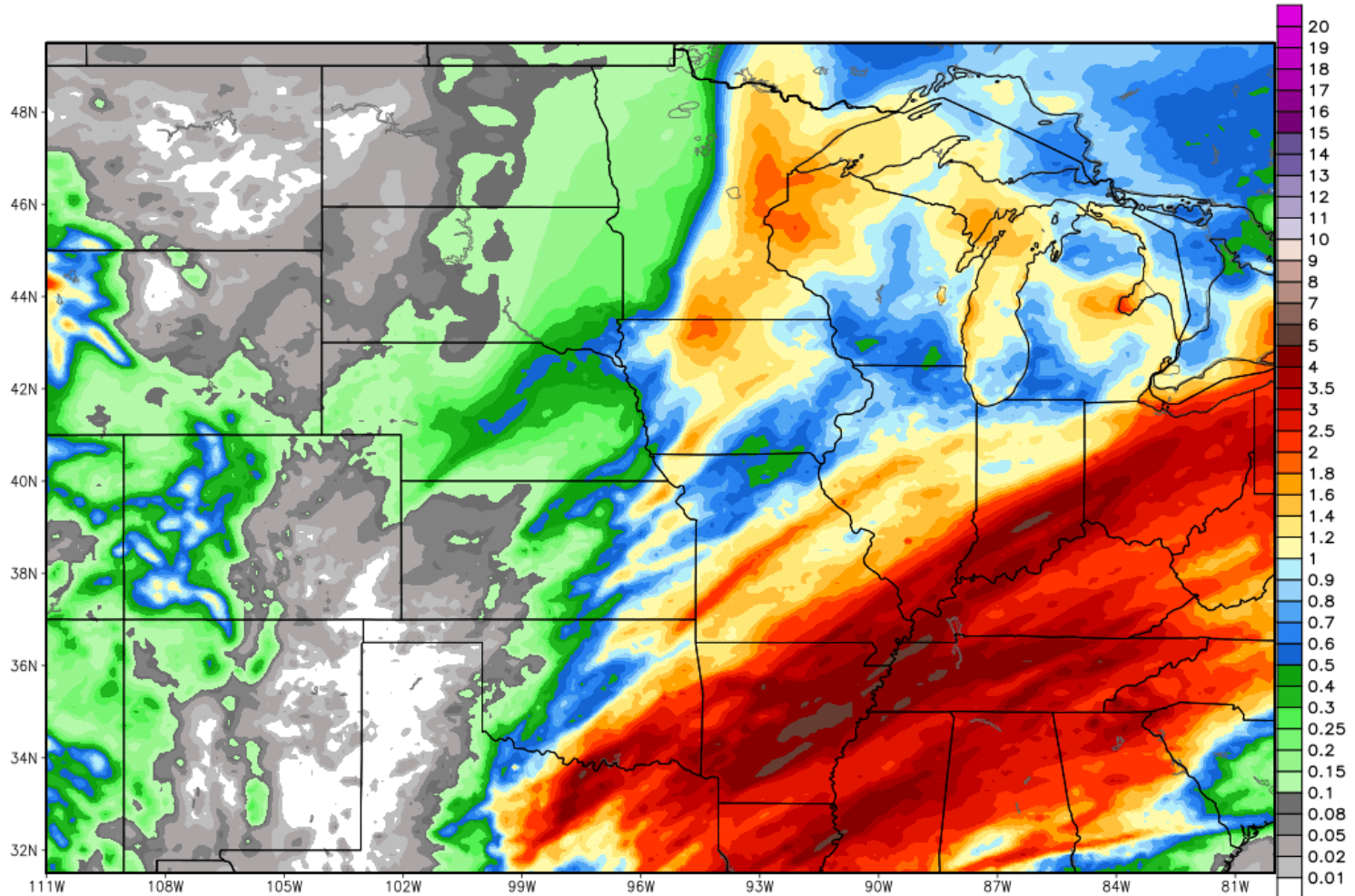
500 mb Height
Valid: 00z Thu 01 Mar 2018

ECMWF-EP5
Hour: 144



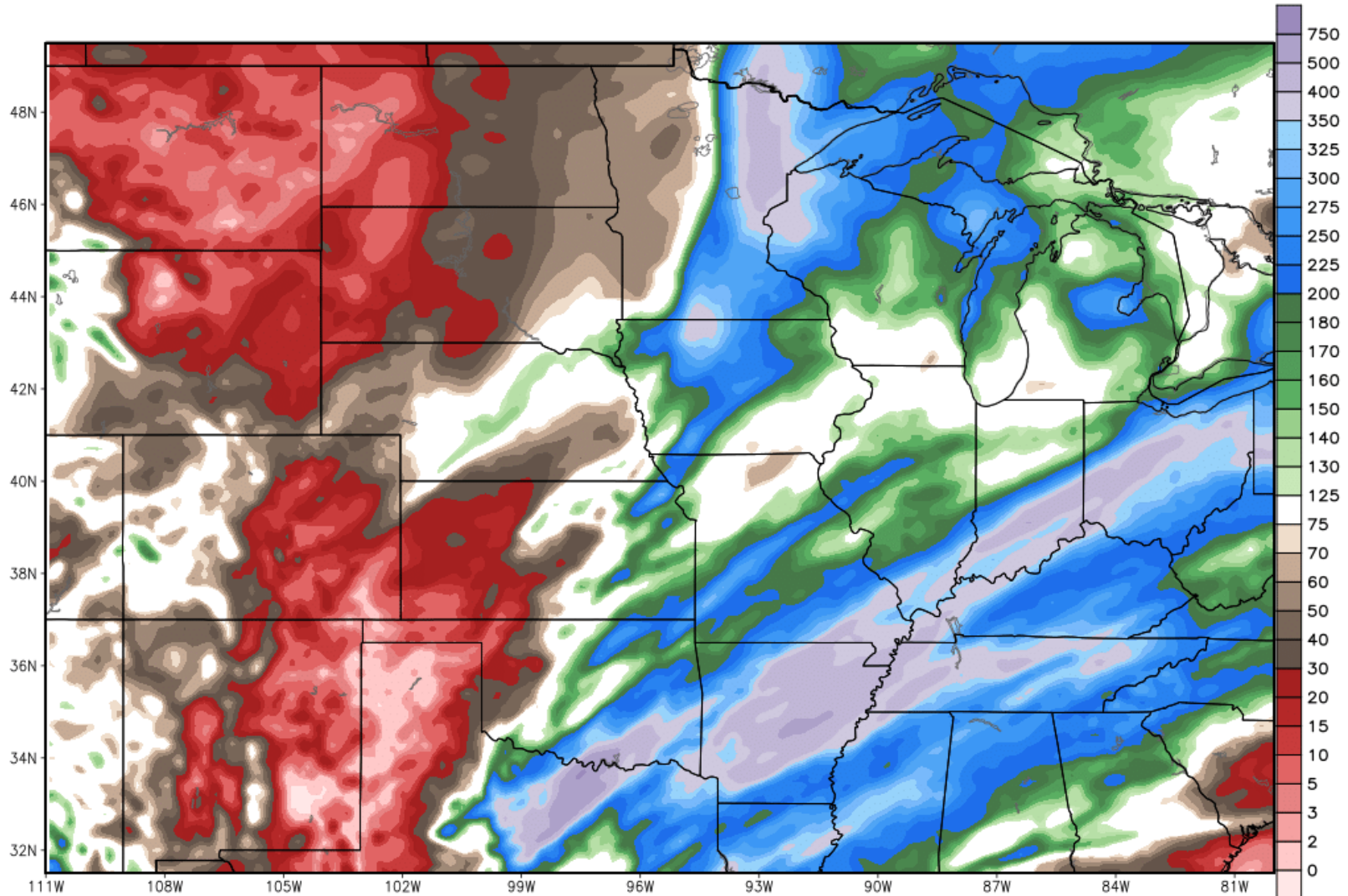
**TOTAL RAINFALL NEXT 7 DAYS-- 2.0.-6.0"/ 50-150mm ne TX se
25% of OK ARK LA MS AL TN KY se MO se ILL south half IND all
of OH PA ... 0.5-1.5"/ 12-38mm over central OK east KS rest of MO
IA east MN WI central ILL north IND MI 0.10-0.50" 2-12mm
western MN eastern SD ND NEB**

ECMWF 7-day Precipitation [inch] INIT: 00Z23FEB2018 fx: [180] hr --> Fri 12Z02MAR2018
Total Precipitation [inches] between 12Z23FEB2018 -- 12Z02MAR2018



PRECIP ANOMALIES NEXT 7D-

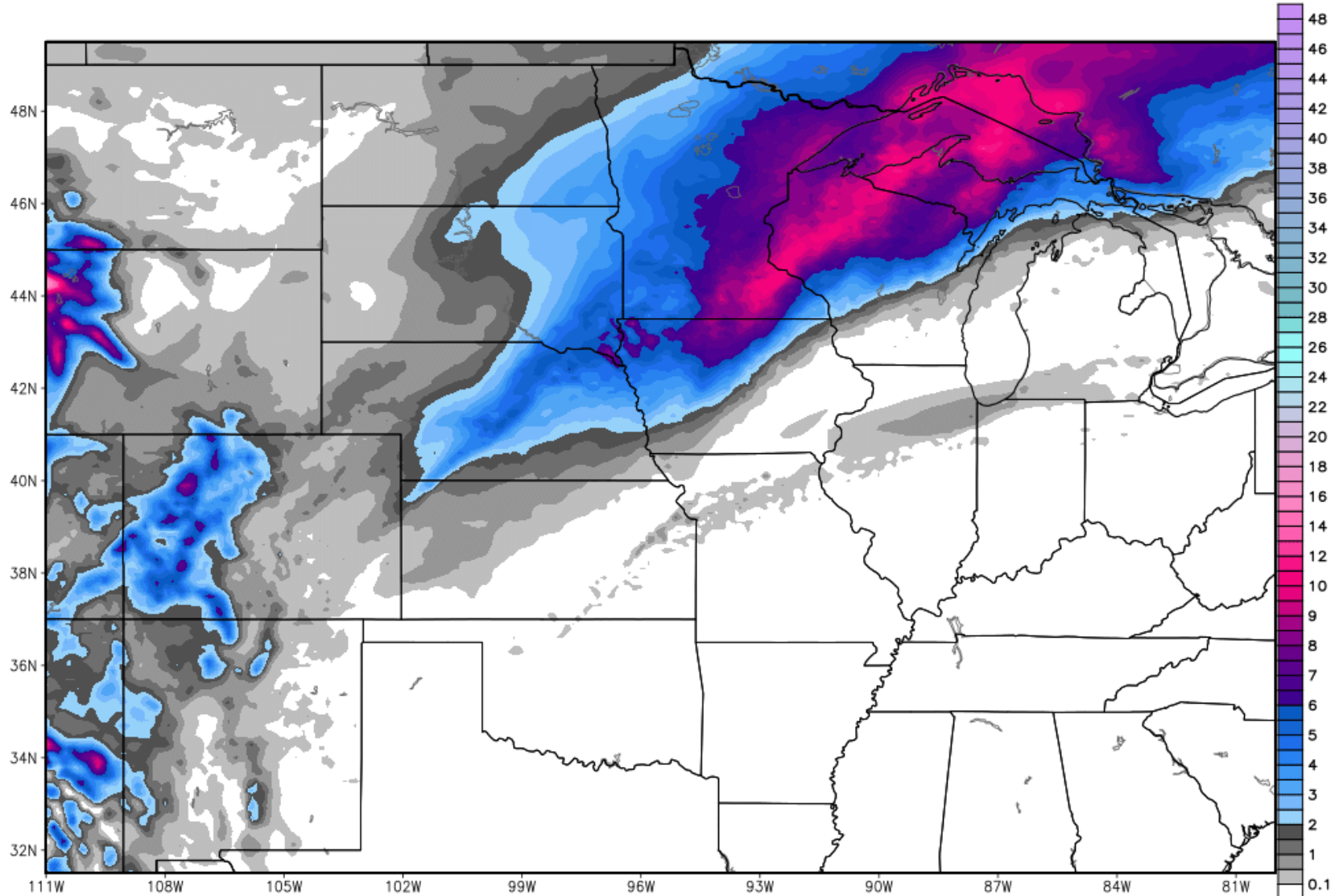
ECMWF 7-day Precip Anomaly [% of normal] between 12Z23FEB2018 -- 12Z02MAR2018
INIT: 00Z23FEB2018 fx: [180] hr --> Fri 12Z02MAR2018



SNOWFALL NEXT 6 DAYS

ECMWF 144hr Snowfall [inch] from 00Z23FEB2018 to Thu 00Z01MAR2018
Model Init: 00Z23FEB2018

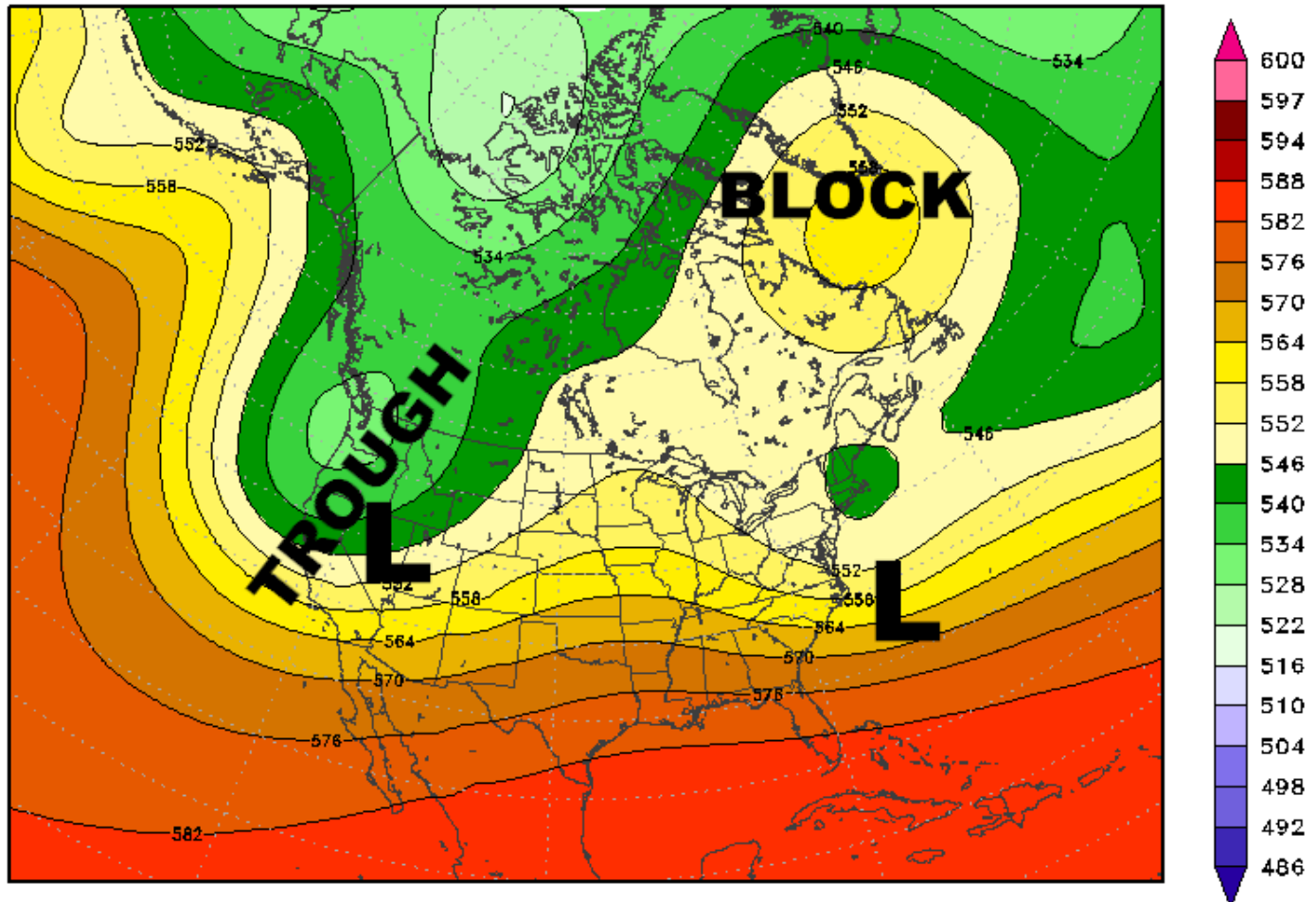
Max 17.62 inch



DAY 8... Block over GREENLAND is moving to east Canada .. Deep Trough over West Coast sending east Low pressure areas that track west to east across the CONUS

500 mb Height
Valid: 00z Sat 03 Mar 2018

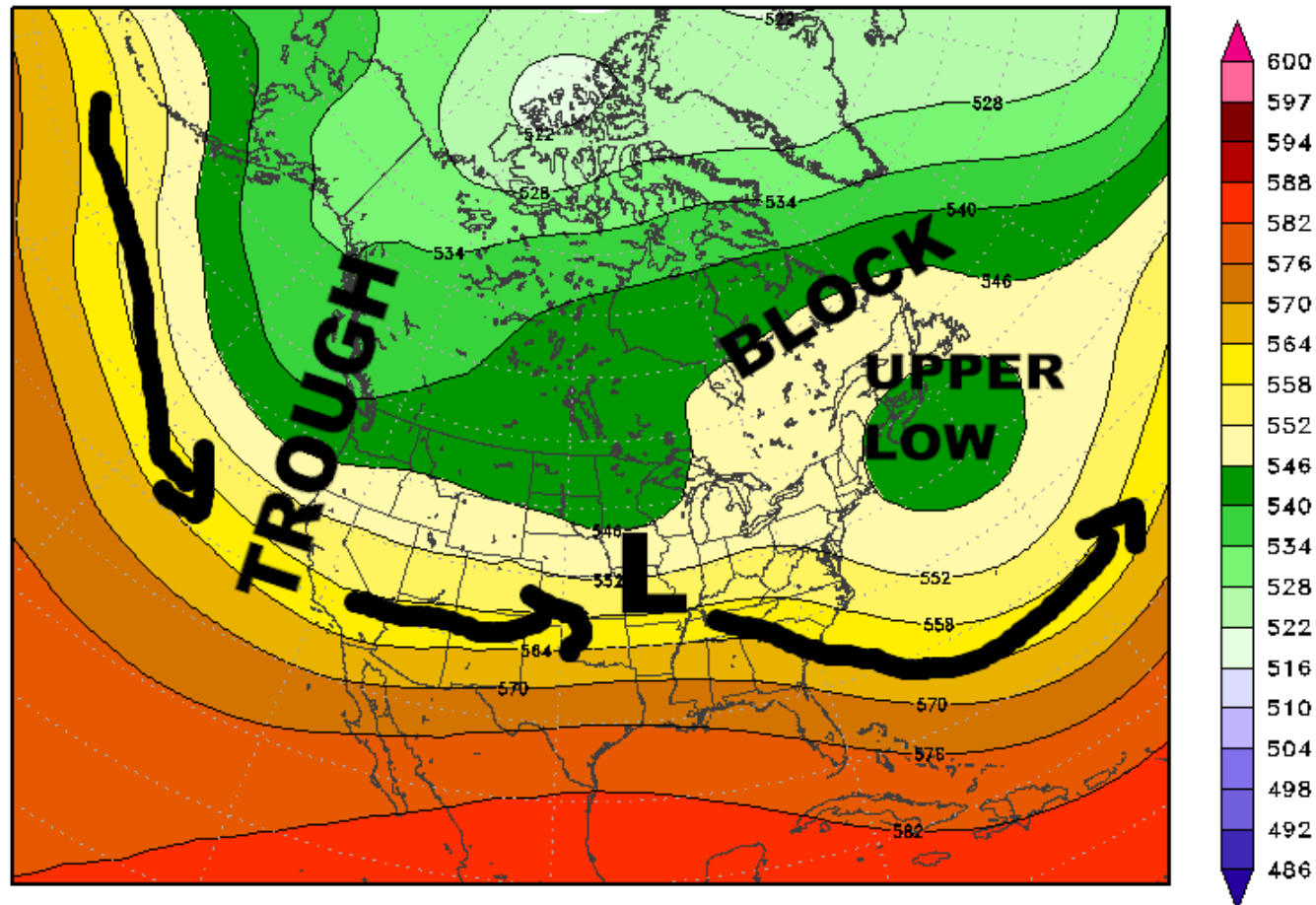
ECMWF-EP5
Hour: 192



DAY11... Block is now over eastern Canada while Deep Trough stays over West Coast ... sending east Low pressure areas that track west to east across the CONUS

500 mb Height
Valid: 12z Mon 05 Mar 2018

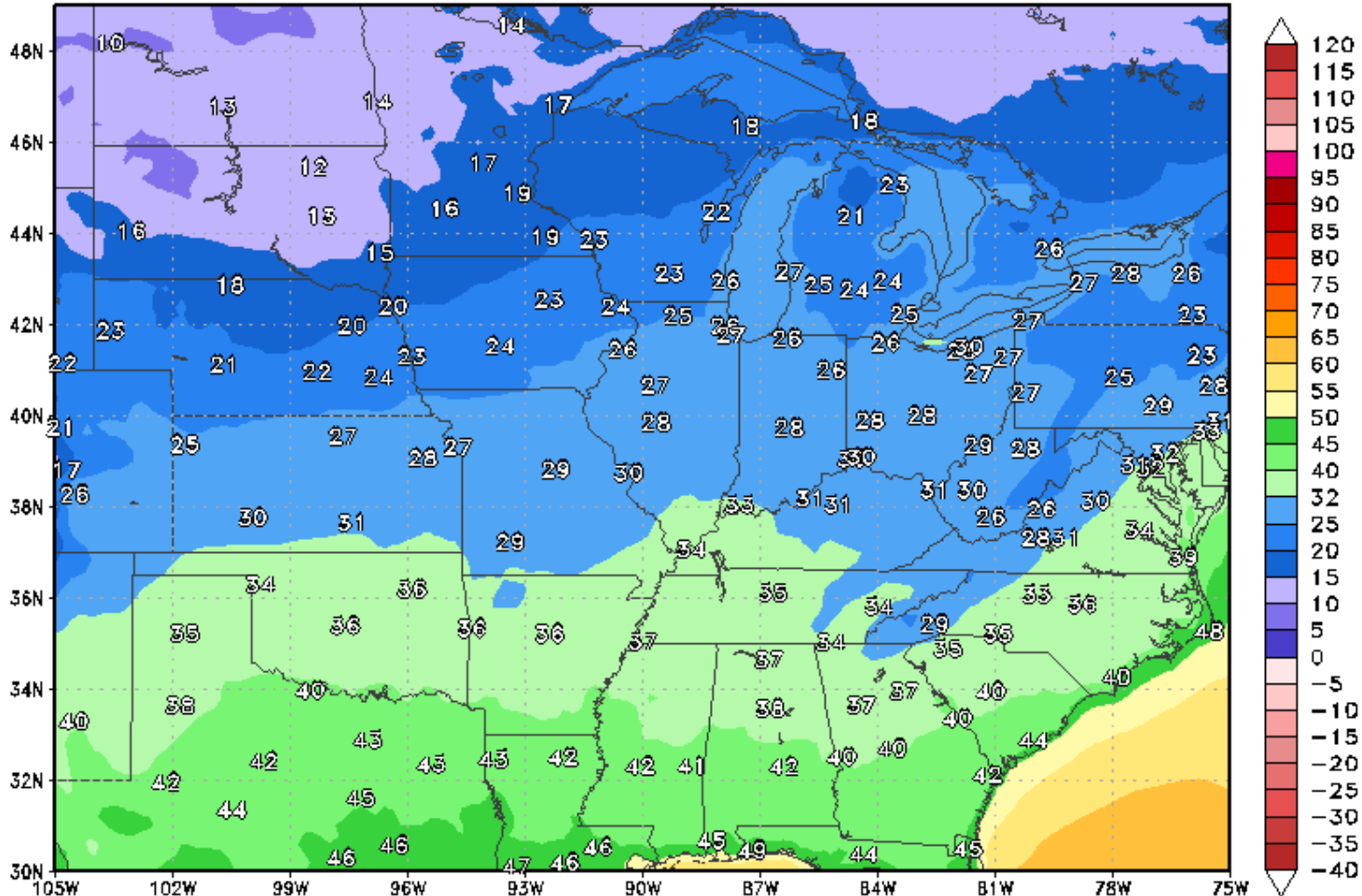
ECMWF-EP5
Hour: 252



FORECAST MIN TEMPS MARCH 9.. Does not seem extreme but remember March temps are usually going up

2 m Min Temperature (F)
Valid: 12z Fri 09 Mar 2018

ECMWF-EPS-MAXRES
Hour: 348



Max: 63.2 F
Min: 8.6 F

StormVistaWxModels.com

Init: 00z Fri 23 Feb 2018
2018-02-23-08:00

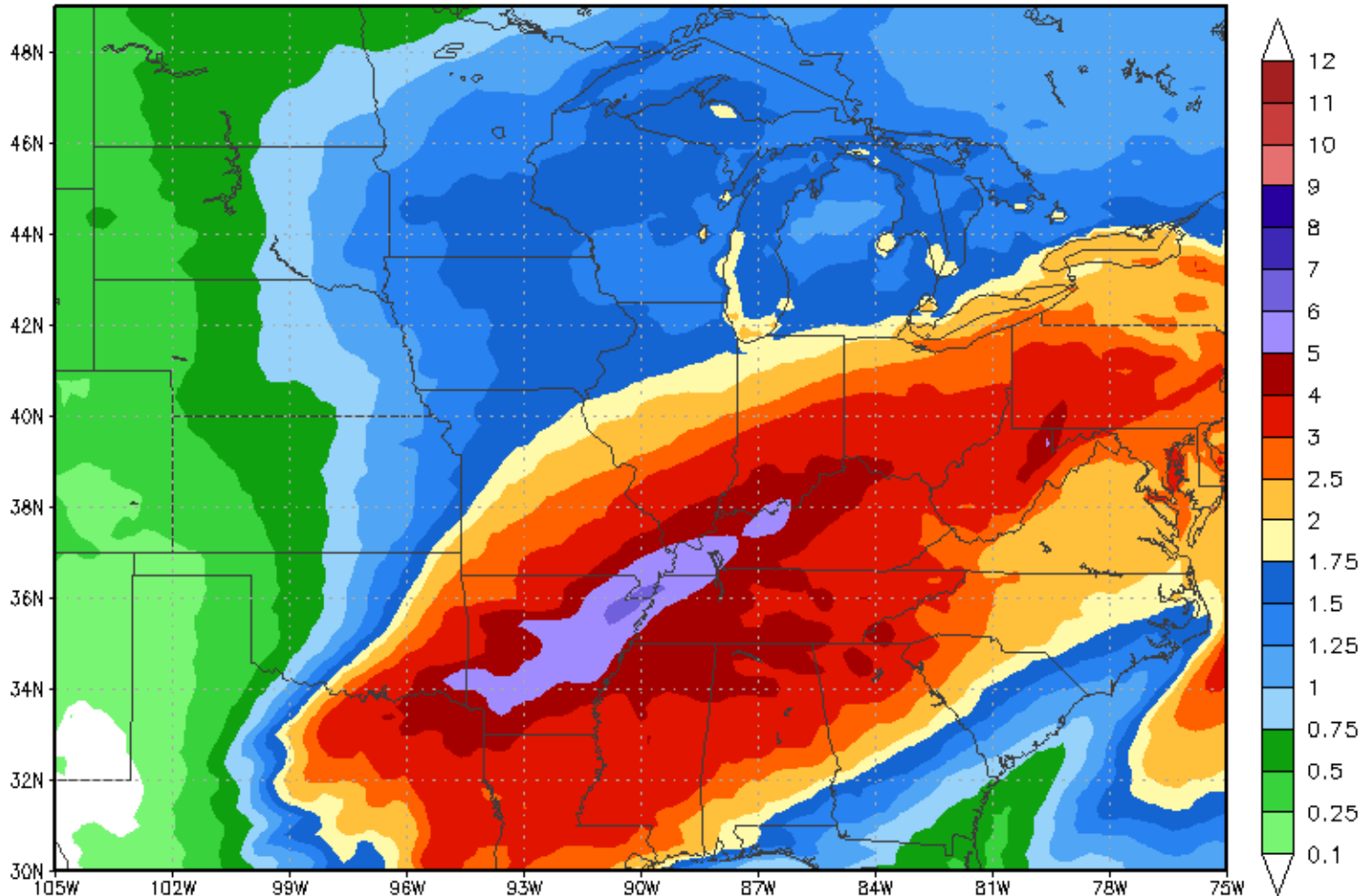
TOTAL RAINFALL NEXT 15 DAYS – EURO ENSEMBLE

360 Hour Total Precipitation (in)

ECMWF-EPS-MAXRES

Valid: 00z Fri 23 Feb 2018 – 00z Sat 10 Mar 2018

Hour: 0 – 360



Max: 6.3 in
Min: 0.0 in

StormVistaWxModels.com

Init: 00z Fri 23 Feb 2018
2018-02-23-08:02

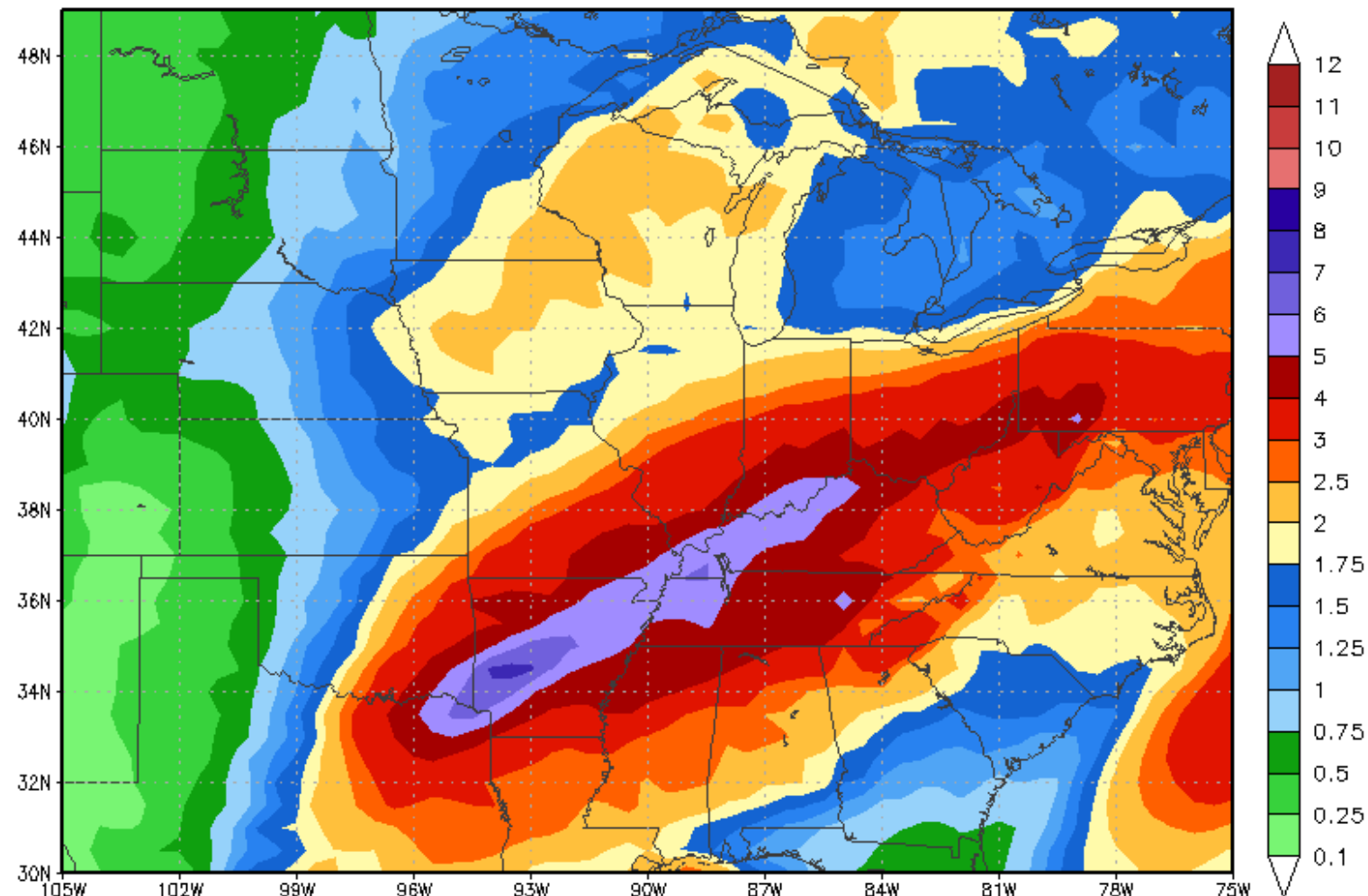
TOTAL RAINFALL NEXT 14 DAYS – GFS ENSEMBLE

384 Hour Total Precipitation (in)

Valid: 06z Fri 23 Feb 2018 – 06z Sun 11 Mar 2018

GFS-ENS-MAXRES

Hour: 0 – 384



Max: 7.4 in
Min: 0.1 in

StormVistaWxModels.com

Init: 06z Fri 23 Feb 2018
2018-02-23-11:33

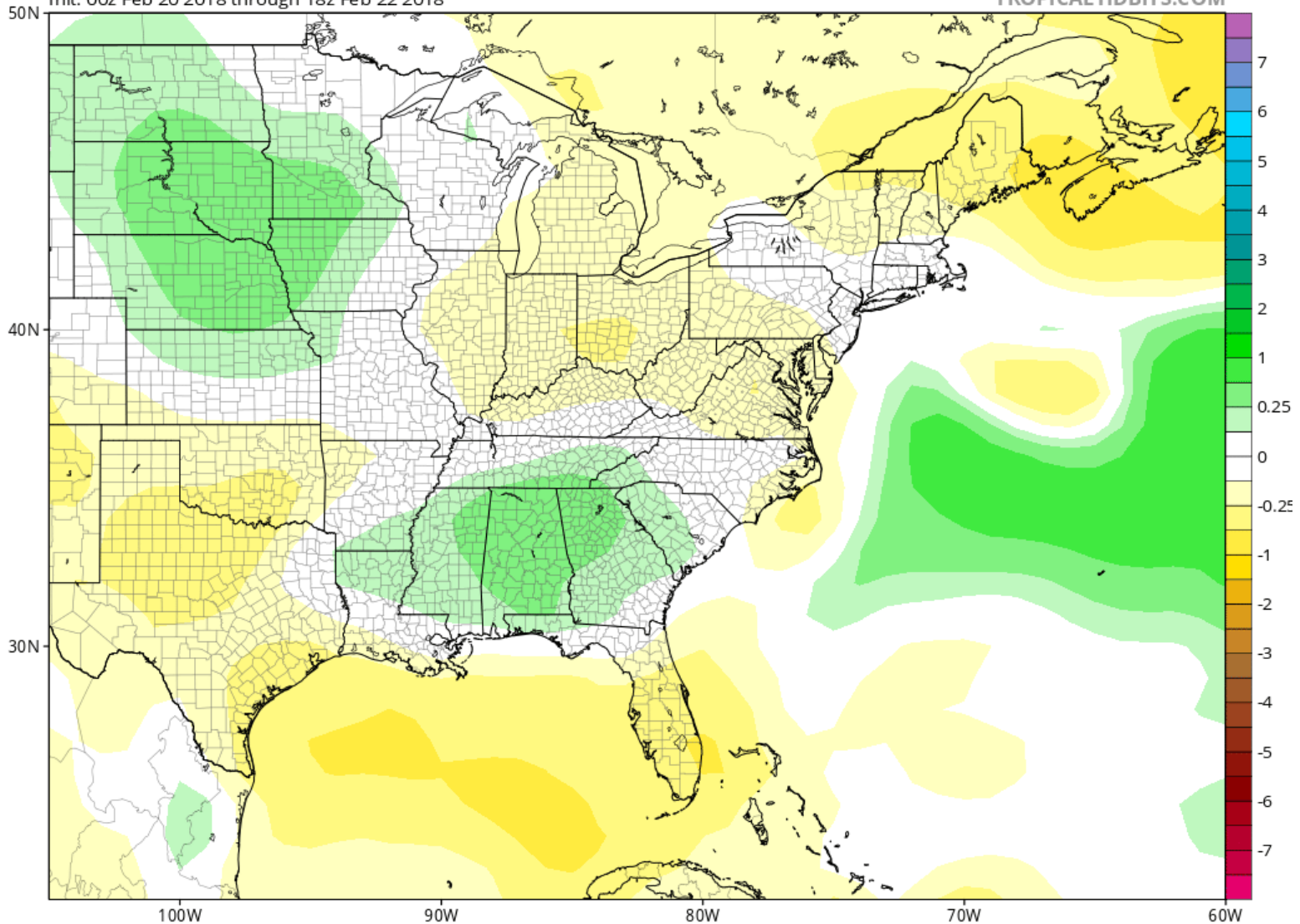
CFS WEEK 2 PRECIP ANOMALIES

CFSv2 Accumulated Precip. Anomaly (in) from 18z01Mar2018 to 18z08Mar2018 (Days 8-14)

Average of last 48 forecasts (12 runs x 4 members)

Init: 00z Feb 20 2018 through 18z Feb 22 2018

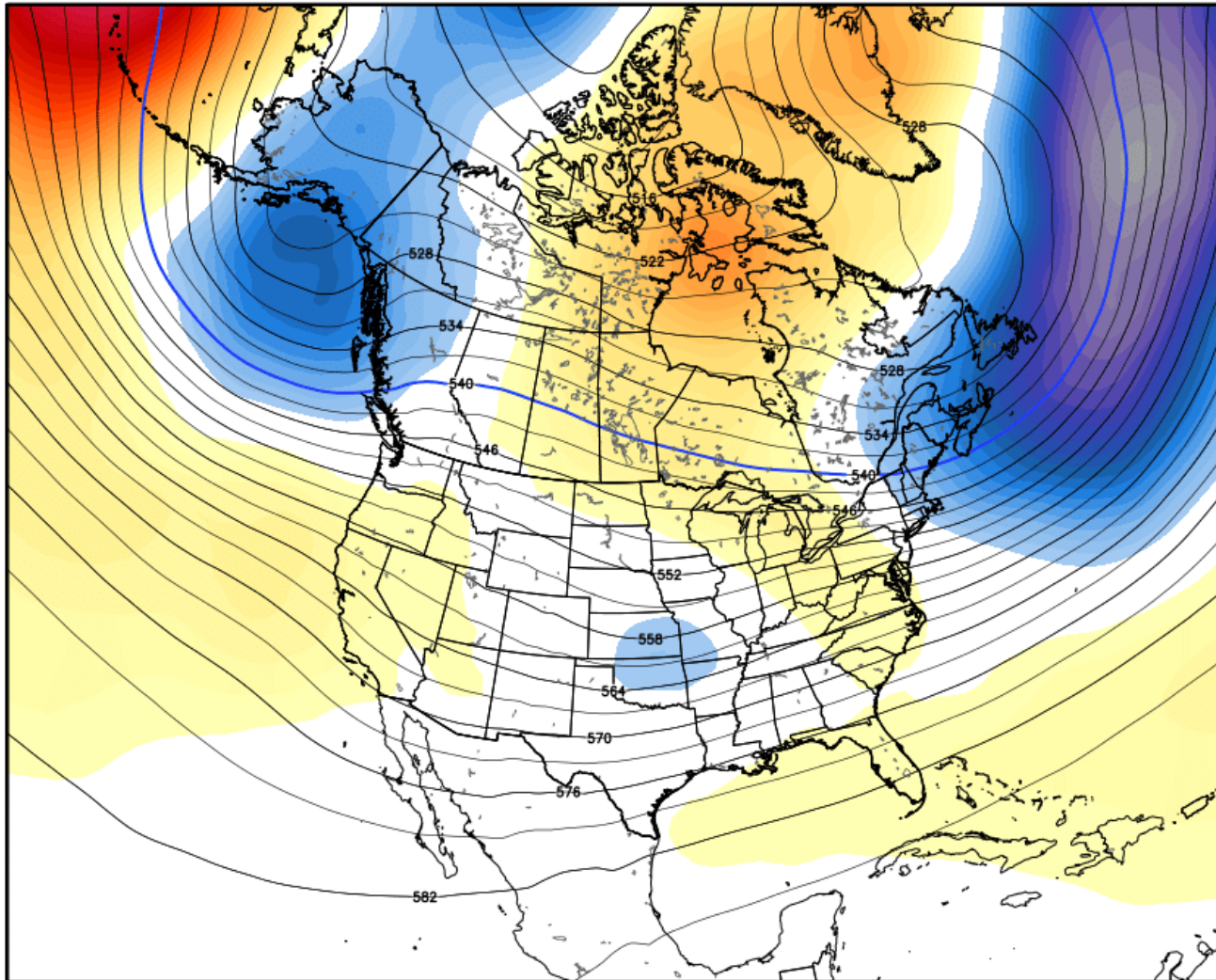
TROPICALTIDBITS.COM



ECMWF EPS Monthly Ensemble Mean 500 hPa Geopotential Height [dm] & Anomaly [m]

INIT: 00Z22FEB2018 fx: [504] hr --> Thu 00Z15MAR2018

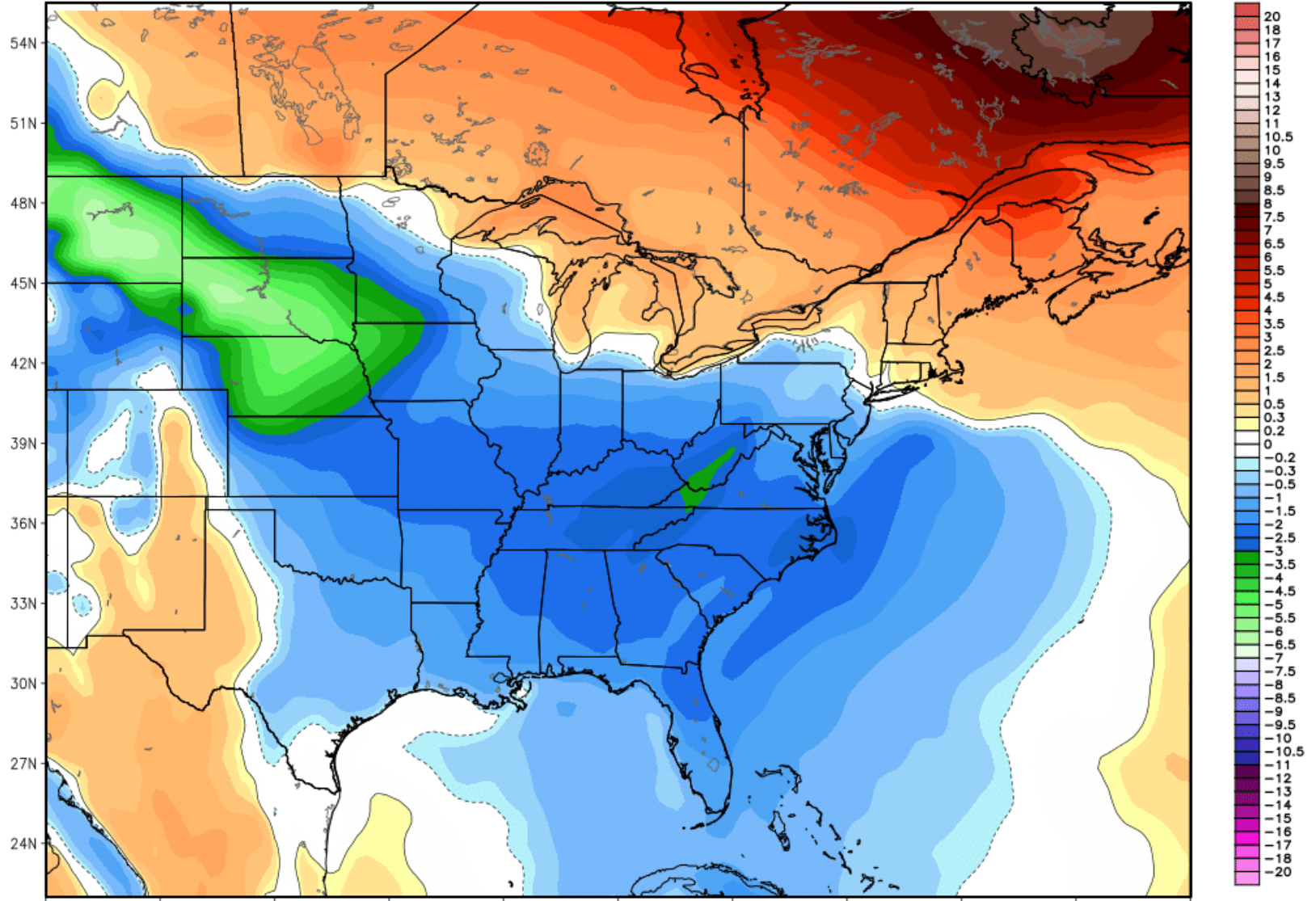
Min|Max: -111.8 | 185.3 m



ECMWF EPS Ensemble Mean 7-day Avg 2m Temperature Anomaly [°C]

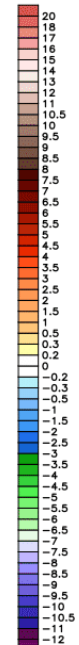
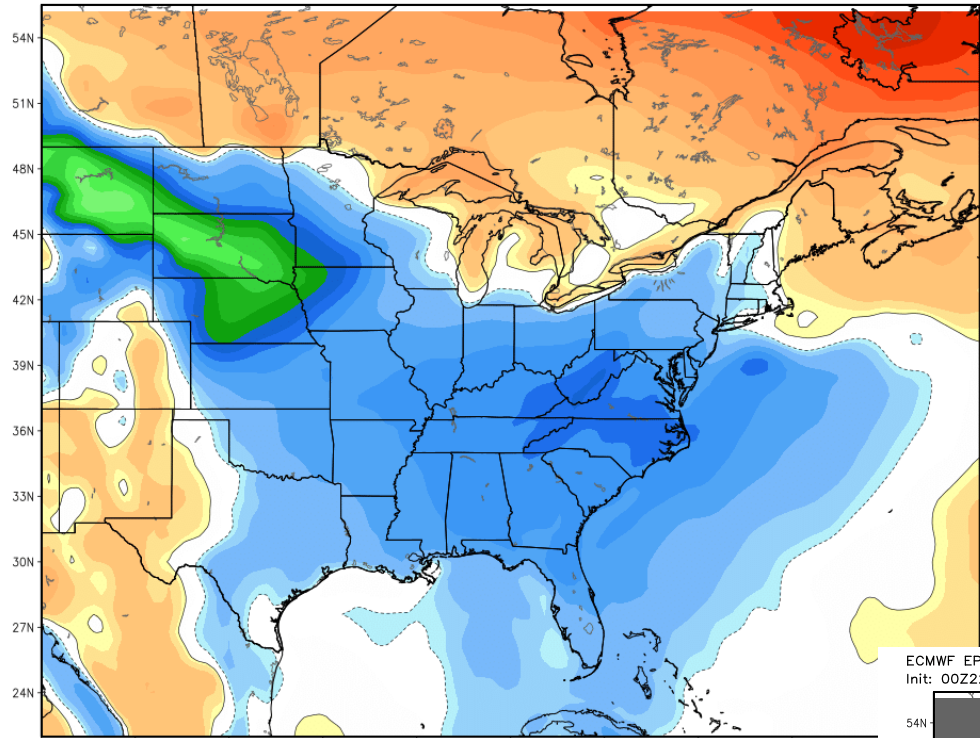
Min|Max: -6.7° | 8.8°C

Init: 00Z22FEB2018 -- [432] hr --> Valid on Mon 00Z12MAR2018 Day 11 - Day 18



Average between 00Z05MAR2018-00Z12MAR2018 | ECMWF EPS 1997-2016 Hindcast Climatology

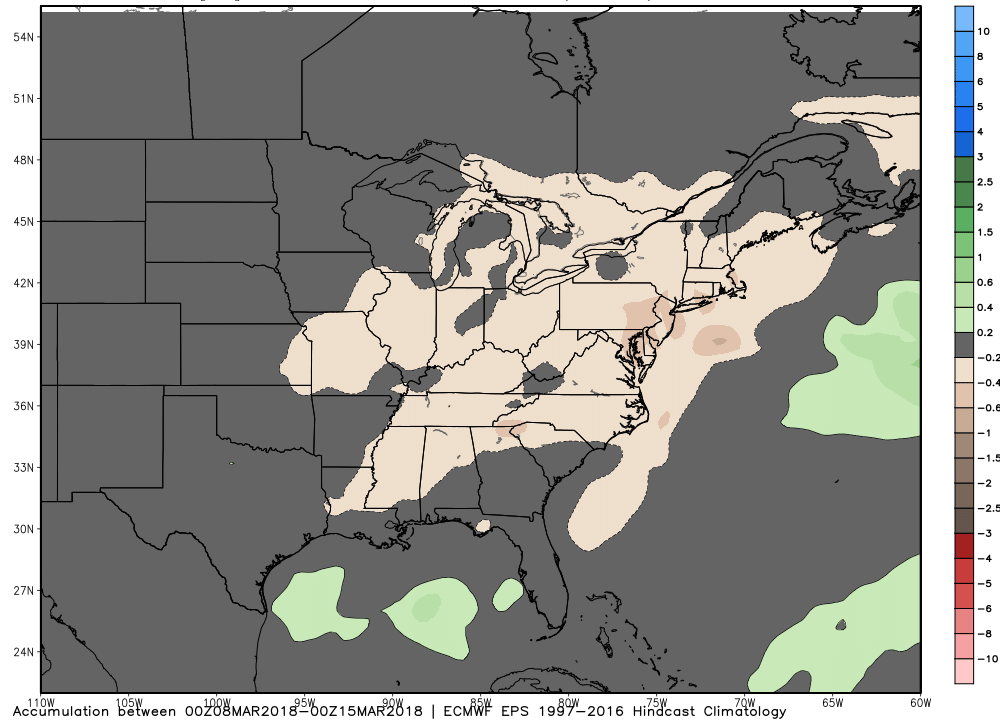
Init: 00Z22FEB2018 -- [504] hr --> Valid on Thu 00Z15MAR2018 Day 14 - Day 21



ECMWF EPS Ensemble Mean 7-day Avg Precipitation Anomaly [inch] Min|Max Anom: -1.3 | 0.7 inch
Init: 00Z22FEB2018 -- [504] hr --> Valid on Thu 00Z15MAR2018 Day 14 - Day 21

Average between 00Z08MAR2018-00Z15MAR2018 | ECMWF EPS 1997-2016 Hindcast Climatology

COLD AND DRY



Accumulation between 00Z08MAR2018-00Z15MAR2018 | ECMWF EPS 1997-2016 Hindcast Climatology

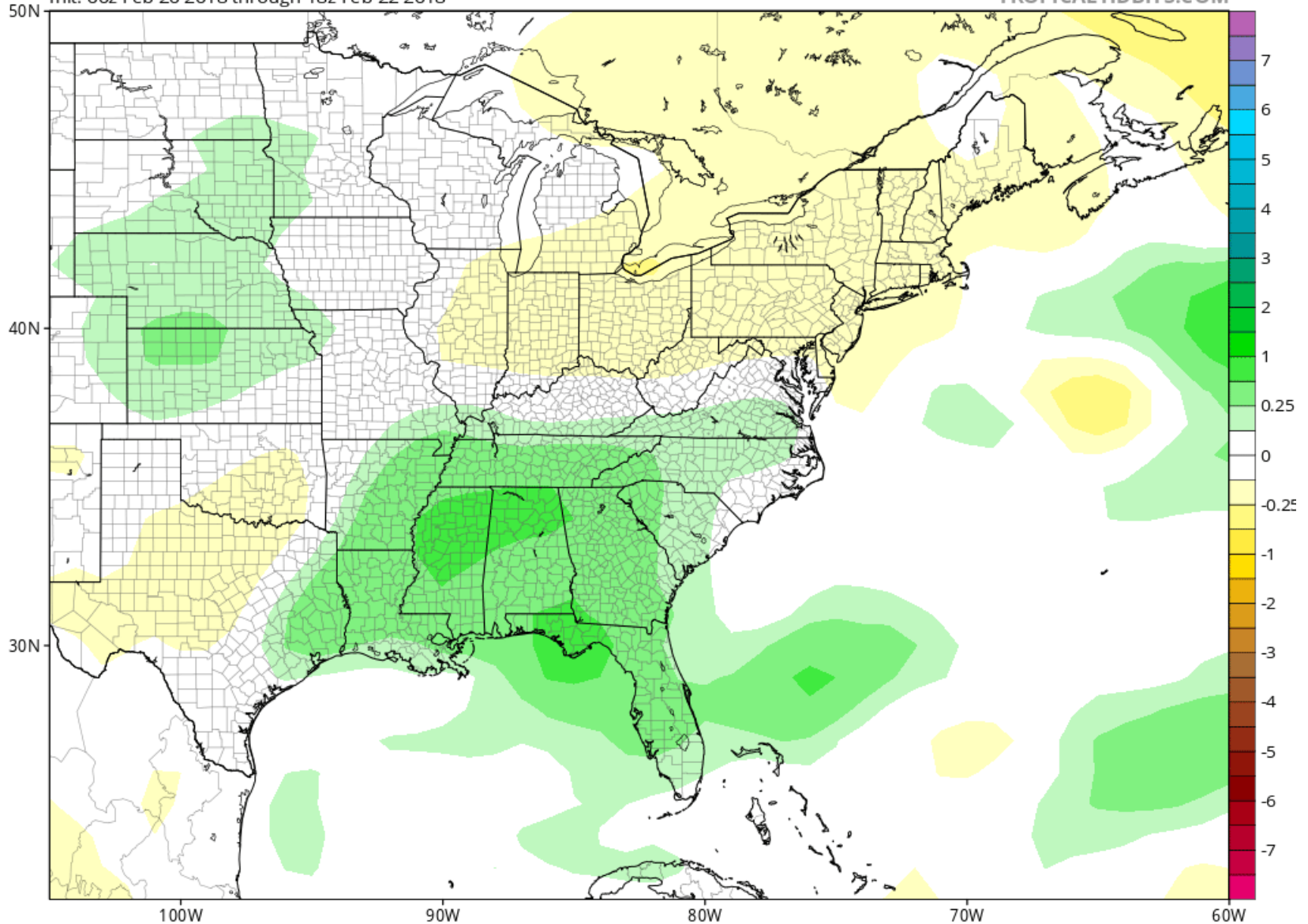
CFS WEEK 3 PRECIP ANOMALIES

CFSv2 Accumulated Precip. Anomaly (in) from 18z08Mar2018 to 18z15Mar2018 (Days 15-21)

Average of last 48 forecasts (12 runs x 4 members)

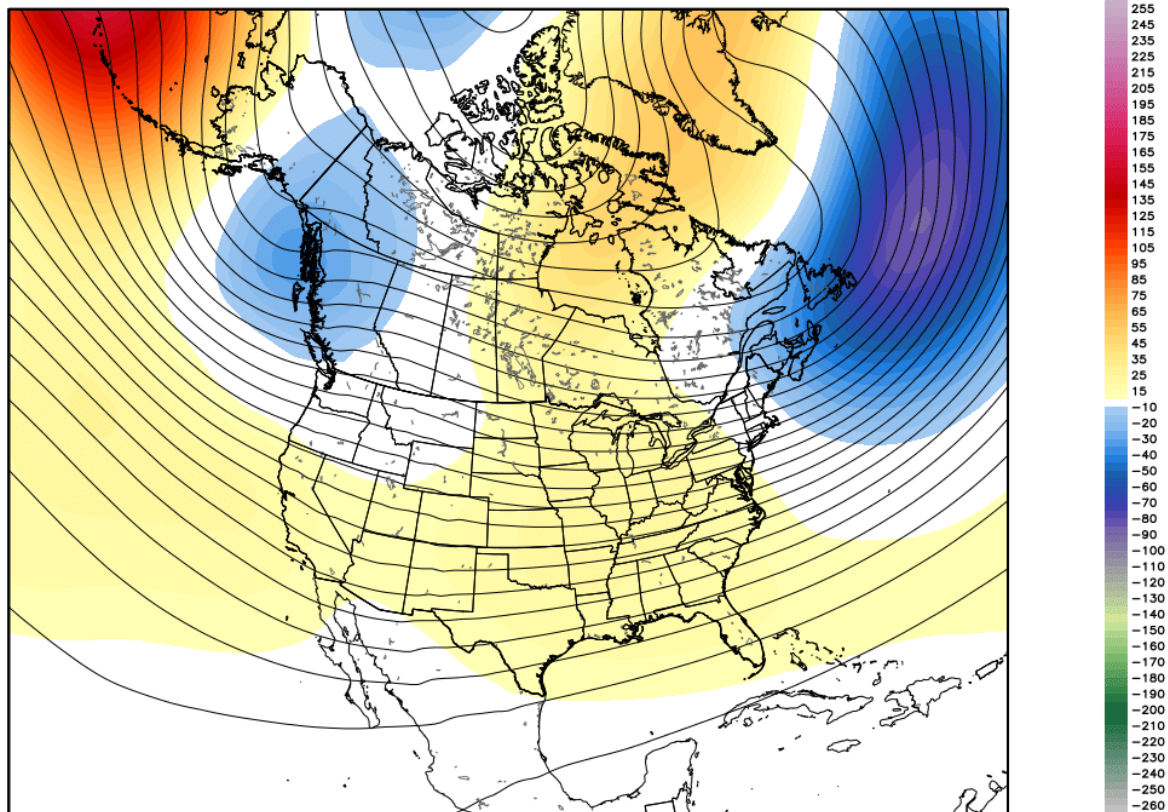
Init: 00z Feb 20 2018 through 18z Feb 22 2018

TROPICALTIDBITS.COM



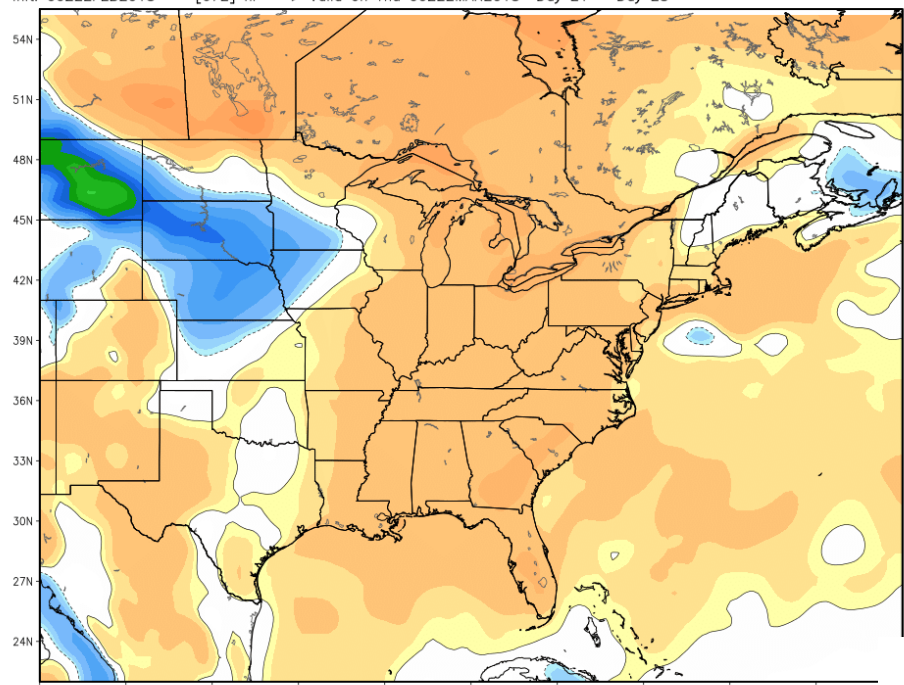
MID MARCH 500mb (Jet stream Map) Blocking pattern over eastern Canada/ Greenland keeps Jet stream south should make for active pattern

ECMWF EPS Ensemble Mean 7-day Avg 500 hPa Geopotential Height Anomaly [m] Min|Max: -85.5 | 166.3 m
Init: 00Z22FEB2018 -- [672] hr --> Valid on Thu 00Z22MAR2018 Day 21 - Day 28

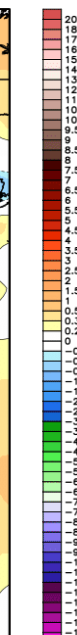


Average between 00Z15MAR2018-00Z22MAR2018 | ECMWF EPS 1996-2015 Hindcast Climatology

ECMWF EPS Ensemble Mean 7-day Avg 2m Temperature Anomaly [°C] Min|Max: -4.3° | 2.4°C
Init: 00Z22FEB2018 -- [672] hr --> Valid on Thu 00Z22MAR2018 Day 21 - Day 28



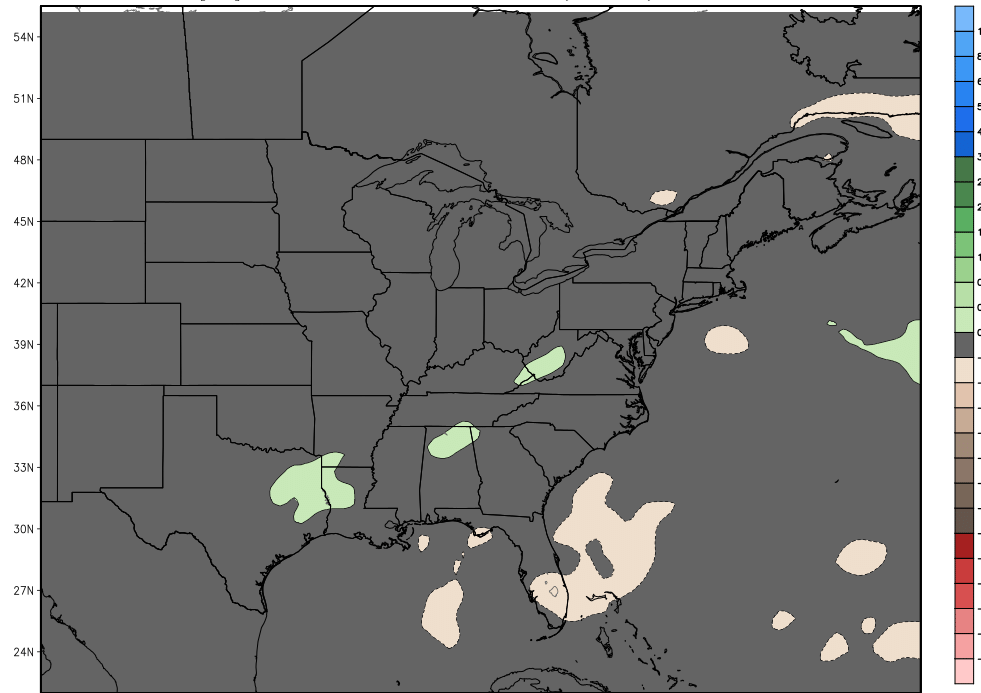
COLD PATTERN ENDS



ECMWF EPS Ensemble Mean 7-day Avg Precipitation Anomaly [inch] Min|Max Anom: -0.4 | 0.3 inch
Init: 00Z22FEB2018 -- [672] hr --> Valid on Thu 00Z22MAR2018 Day 21 - Day 28

Average between 00Z15MAR2018-00Z22MAR2018 | ECMWF EPS 1997-2016 Hindcast Climatology

NO strong signal about rainfall



Accumulation between 00Z15MAR2018-00Z22MAR2018 | ECMWF EPS 1997-2016 Hindcast Climatology

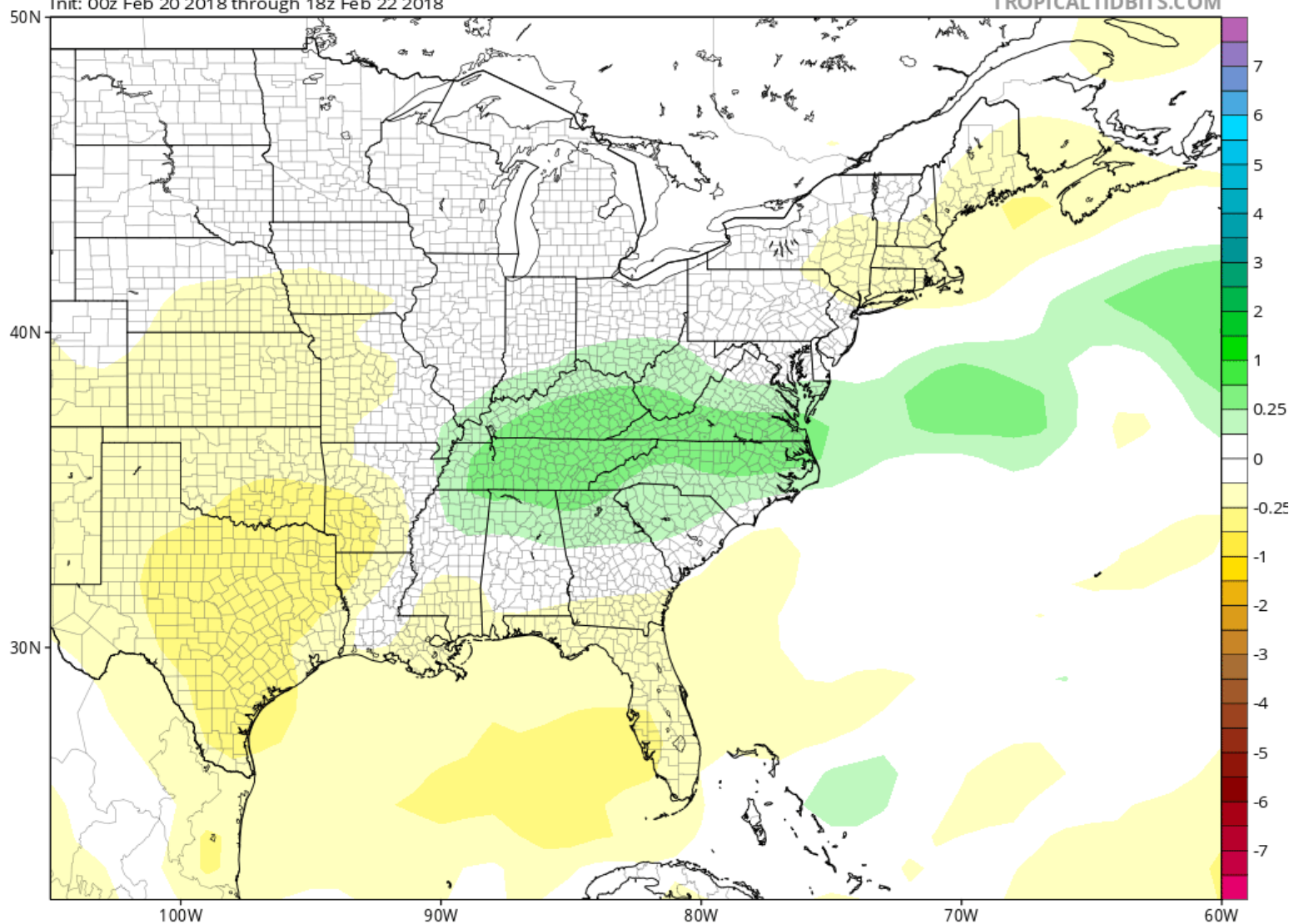
CFS WEEK 4 PRECIP ANOMALIES

CFSv2 Accumulated Precip. Anomaly (in) from 18z15Mar2018 to 18z22Mar2018 (Days 22-28)

Average of last 48 forecasts (12 runs x 4 members)

Init: 00z Feb 20 2018 through 18z Feb 22 2018

TROPICALTIDBITS.COM



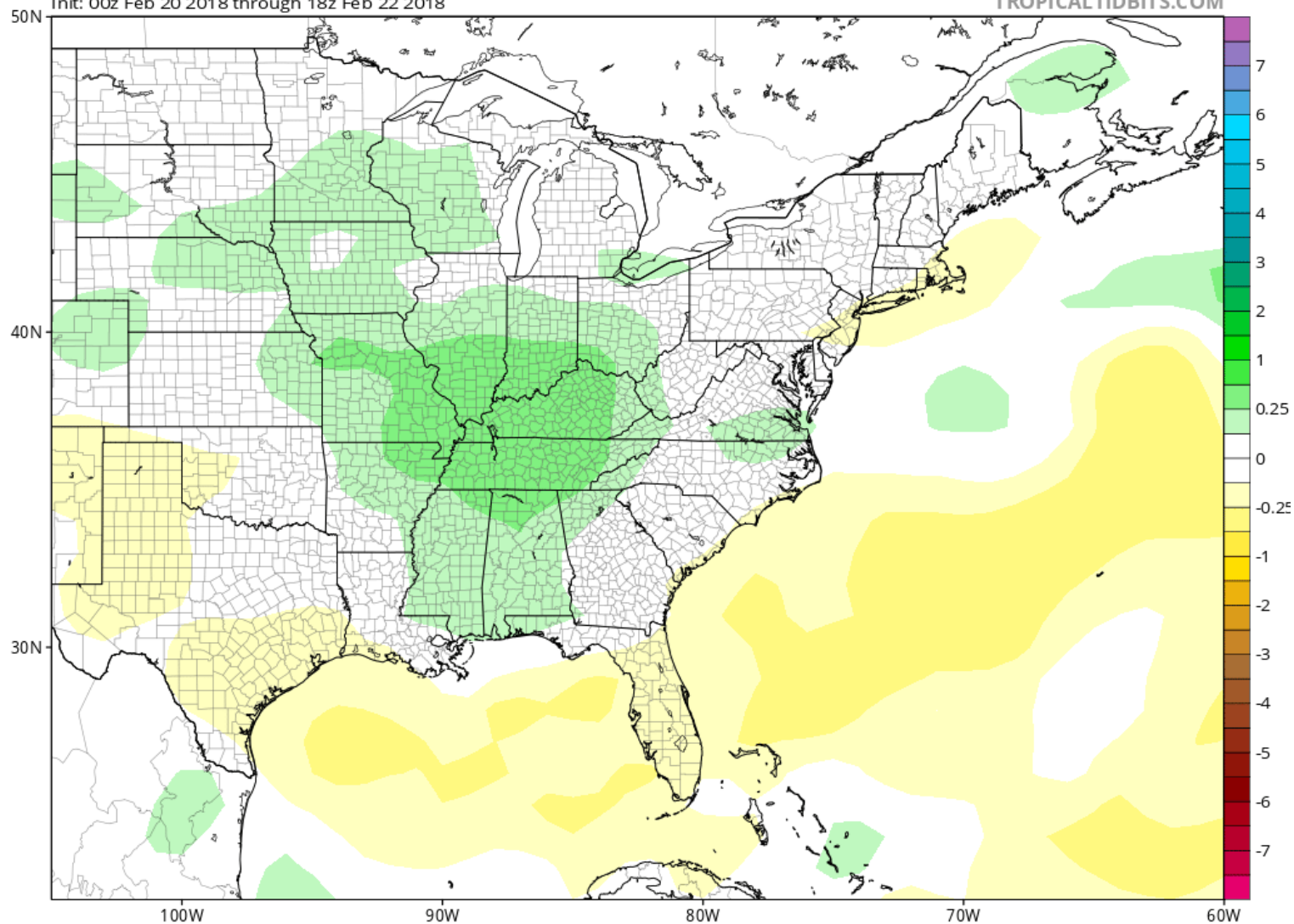
CFS WEEK 5 PRECIP ANOMALIES

CFSv2 Accumulated Precip. Anomaly (in) from 18z22Mar2018 to 18z29Mar2018 (Days 29-35)

Average of last 48 forecasts (12 runs x 4 members)

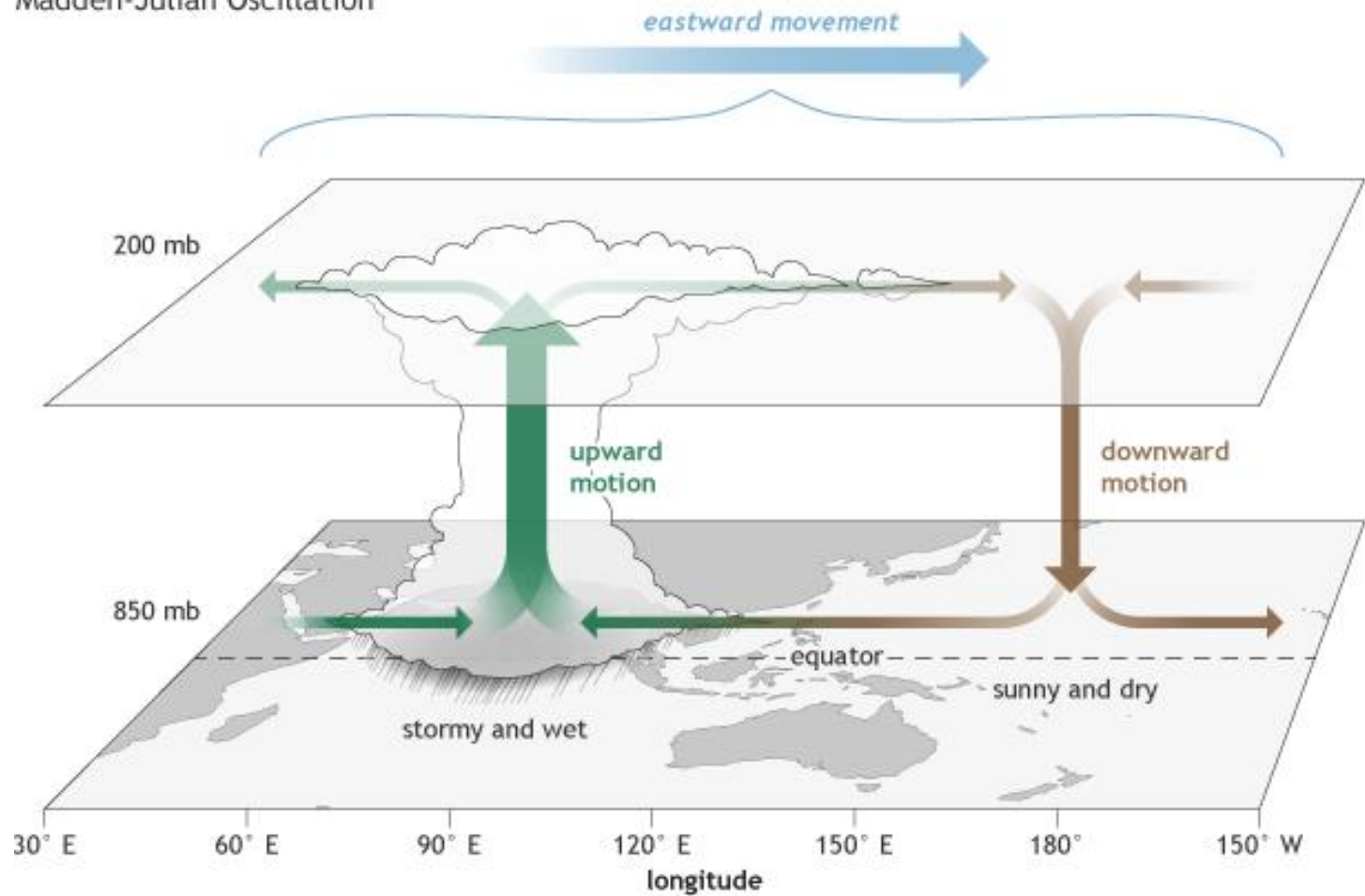
Init: 00z Feb 20 2018 through 18z Feb 22 2018

TROPICALTIDBITS.COM

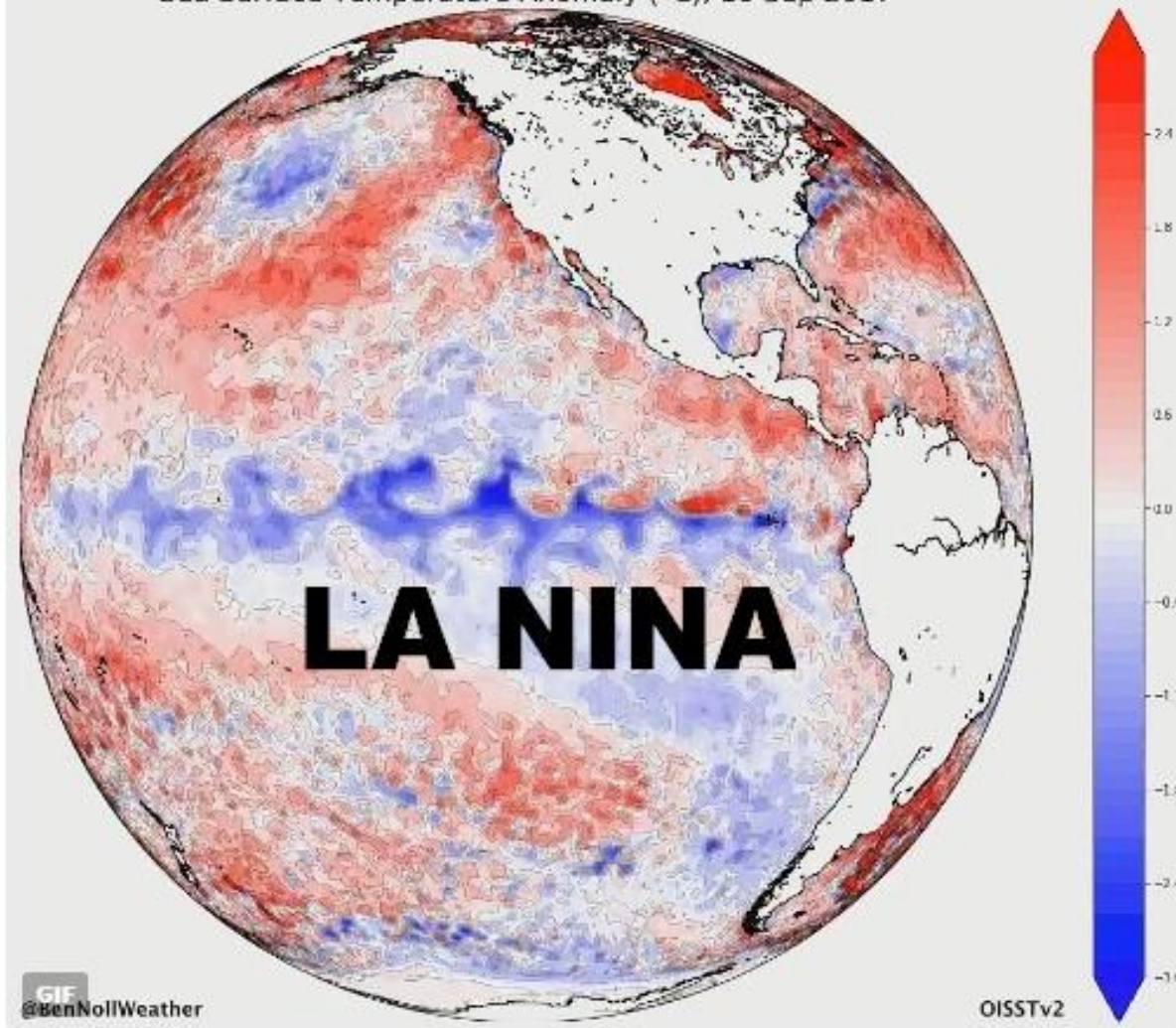


LETS TALK MJO/ENSO

Madden-Julian Oscillation

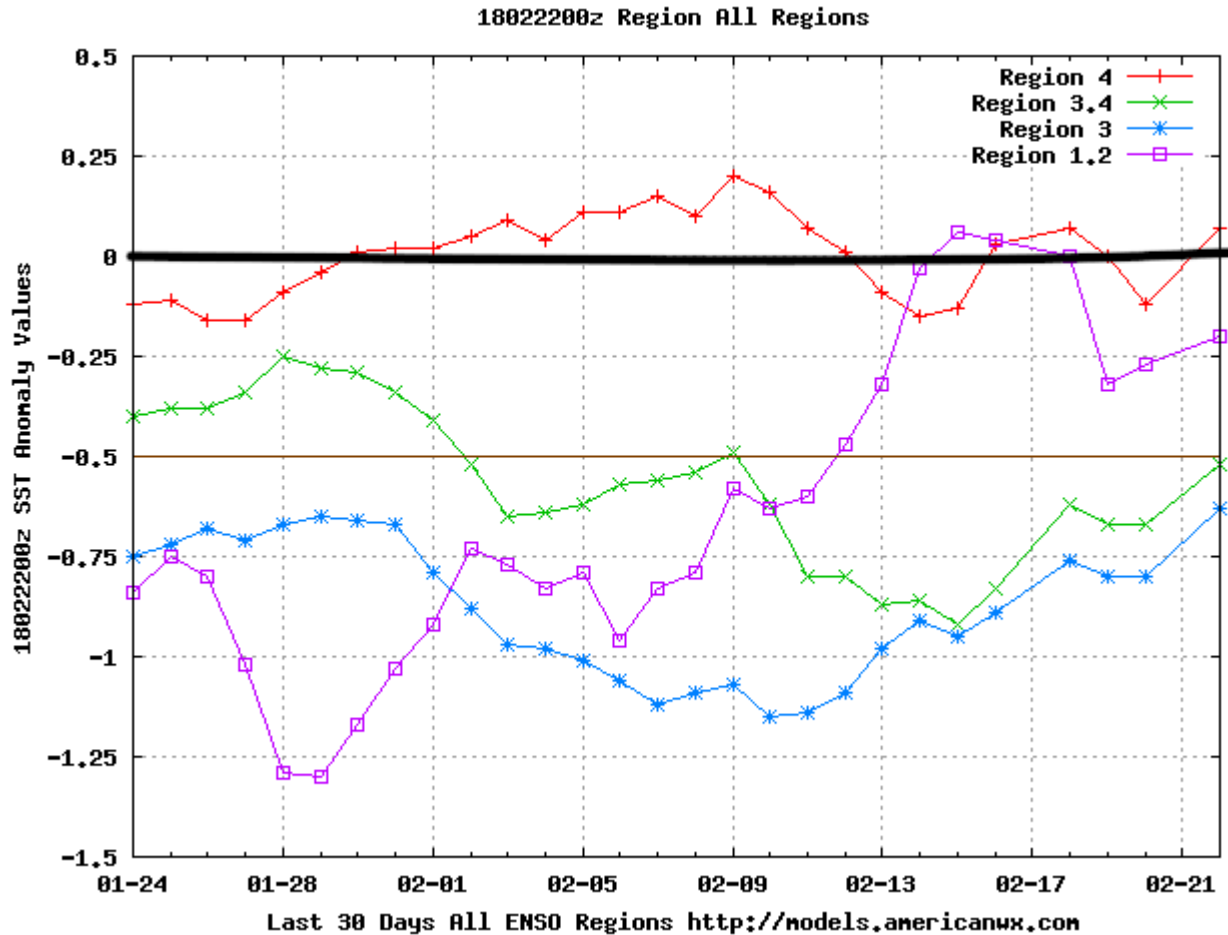


Sea Surface Temperature Anomaly (°C), 10 Sep 2017



6:29 AM - 13 Sep 2017

ACTUAL SEA SURFACE TEMP ANOMALIES – of all 4 regions.. **LA NINA NOW HOLDING**



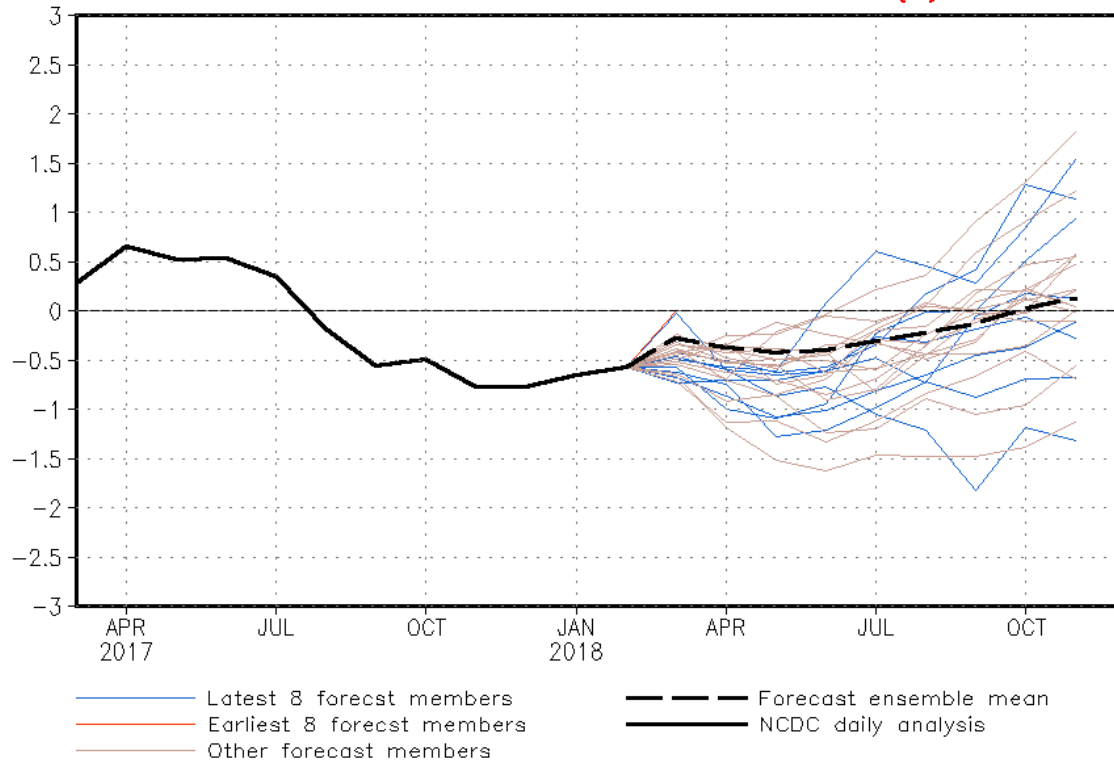
LATEST CFS MODEL PROJECTION = ** La Nina WEAKENING BY APRIL



NWS/NCEP/CPC

Last update: Thu Feb 22 2018
Initial conditions: 23Jan2018-1Feb2018

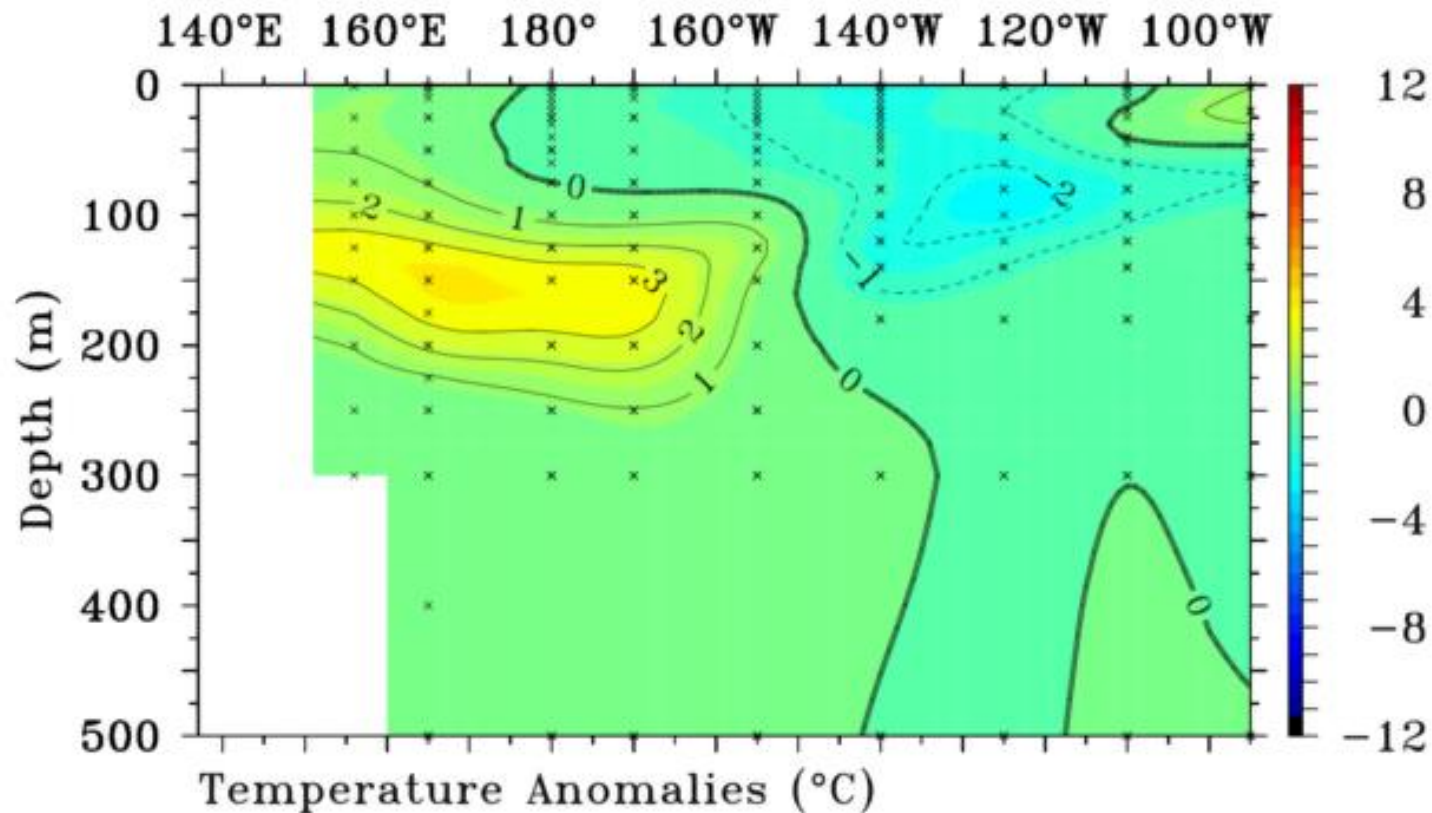
CFSv2 forecast Nino3.4 SST anomalies (K)



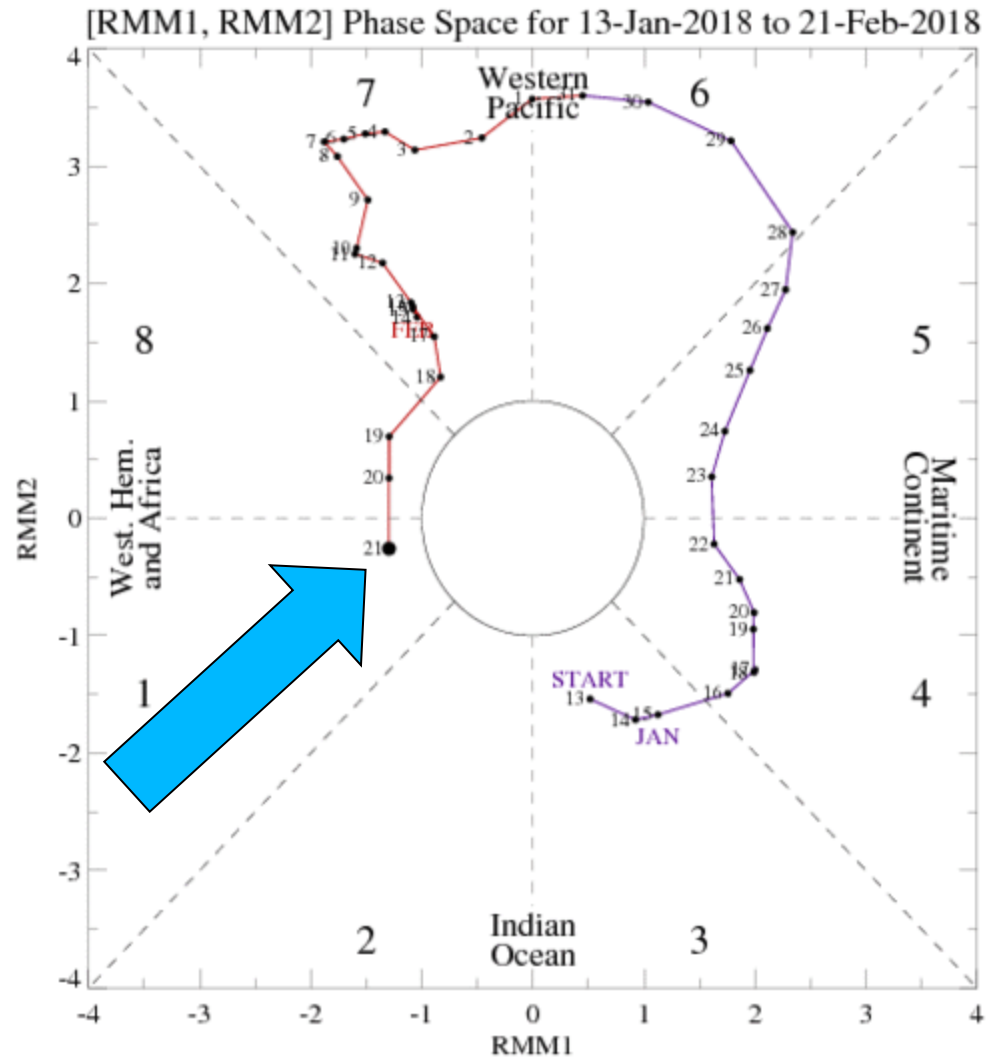
LOOKING BENEATH THE SURFACE ALONG EQUATORIAL PACIFIC ...WEAK LA NINA HOLDING ON

Five-Day Data

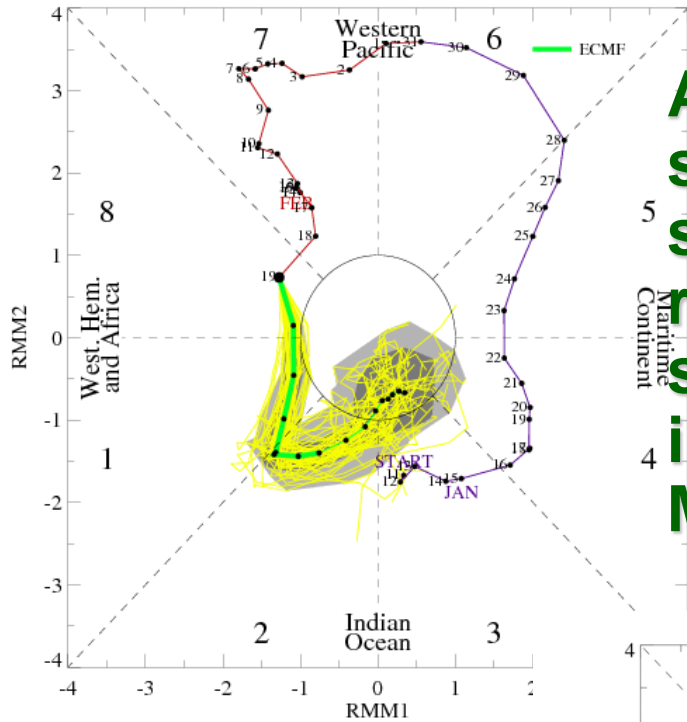
Ending On February 21 2018 2°S to 2°N Average



MJO IS IN PHASE 8/1

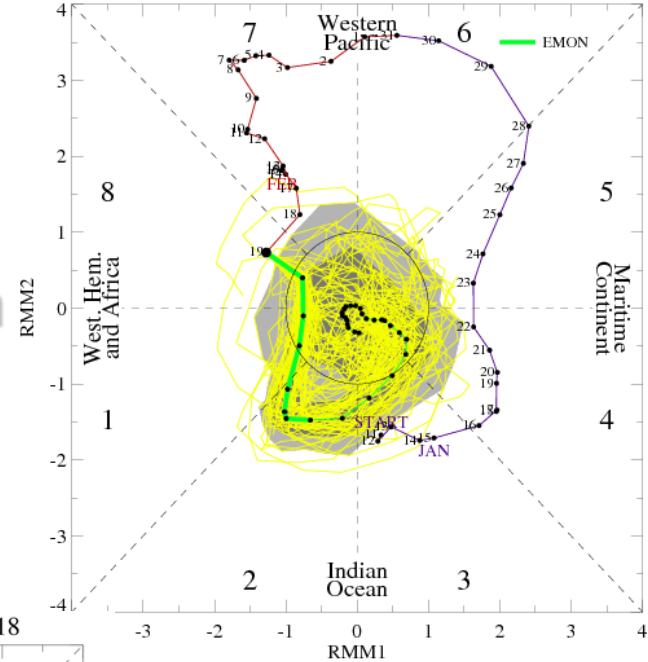


MJO Index Forecast for 20Feb2018-06Mar2018

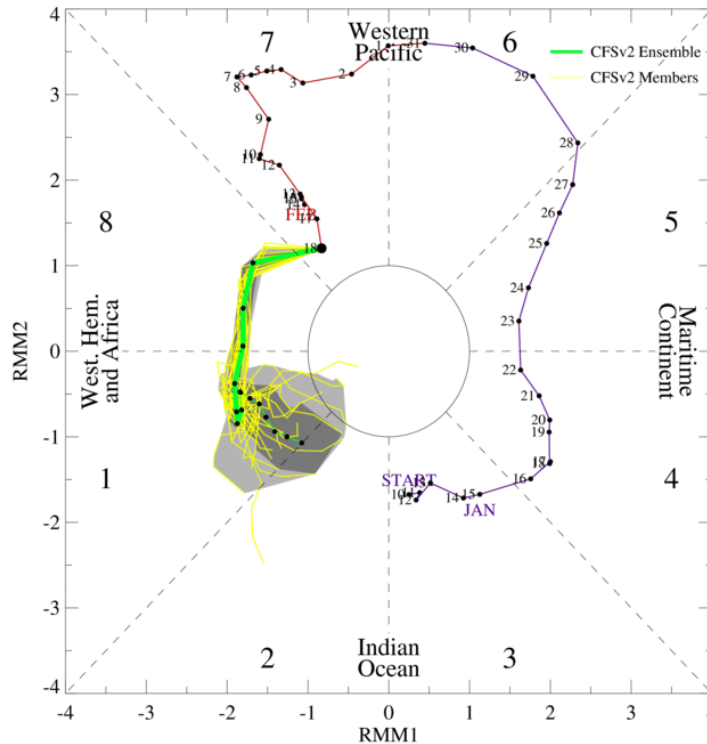


ALL MODELS
shows Moderate
string Phase 8
rest of FEB with
some weakening
in Phase 1 in
March

MJO Index Forecast for 20Feb2018-23Mar2018

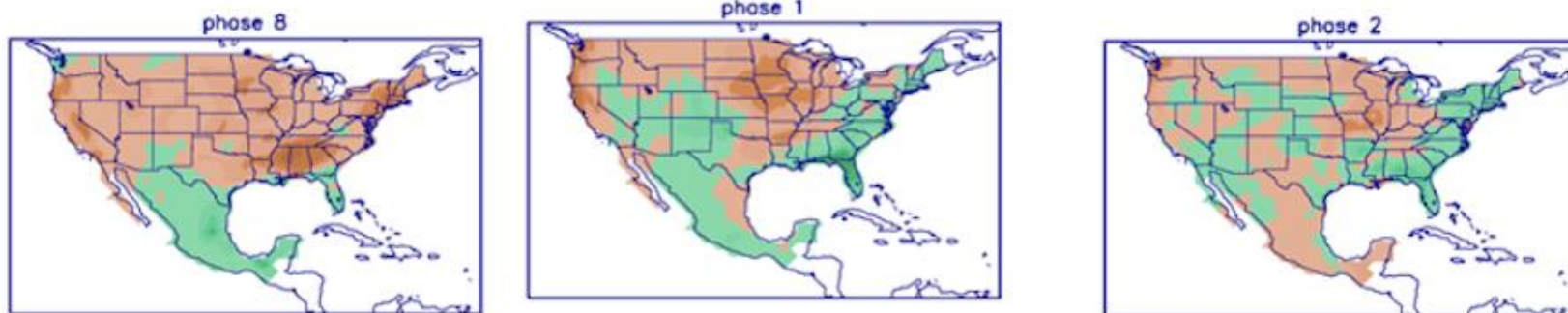


MJO Index Forecast for 19Feb2018 to 05Mar2018



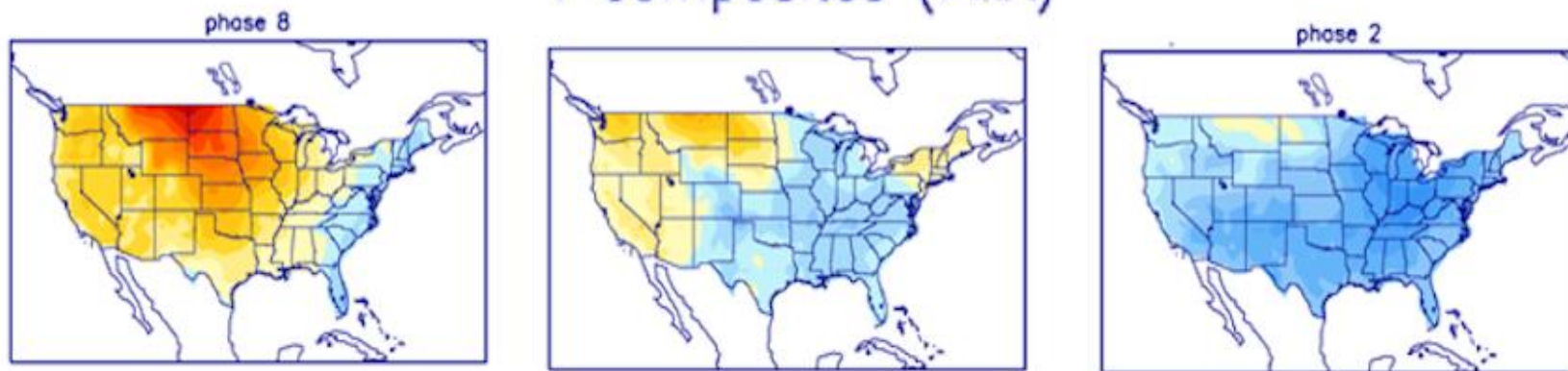
Phase 8= DRY all of Plains Midwest Delta. PHASE 1= some rain in sw KS COL west OK west TX.. Same on Phase 2

P composites (FMA)



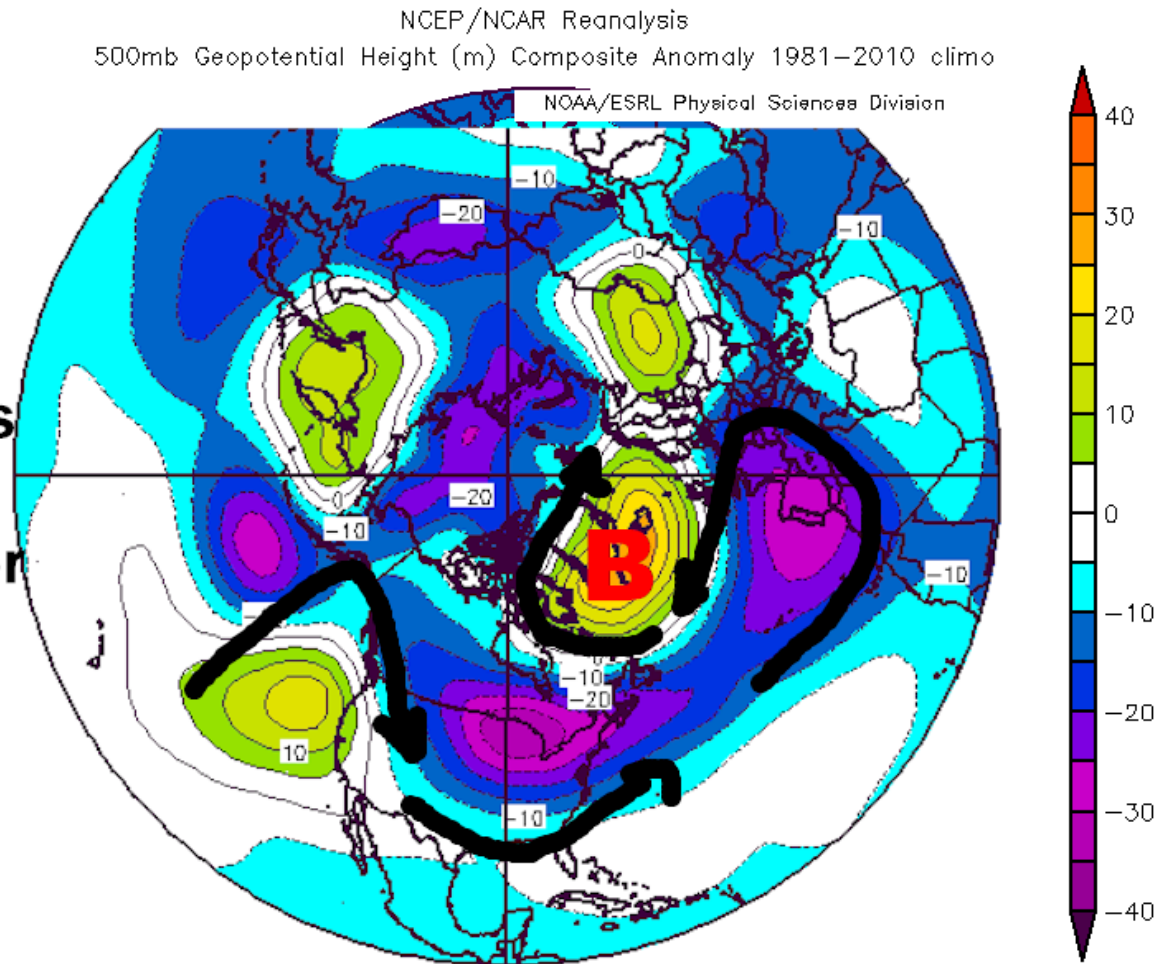
Phase 8= WARM all of Plains WCB PHASE 1= cold Midwest Delta Phase 2 much colder

T composites (FMA)



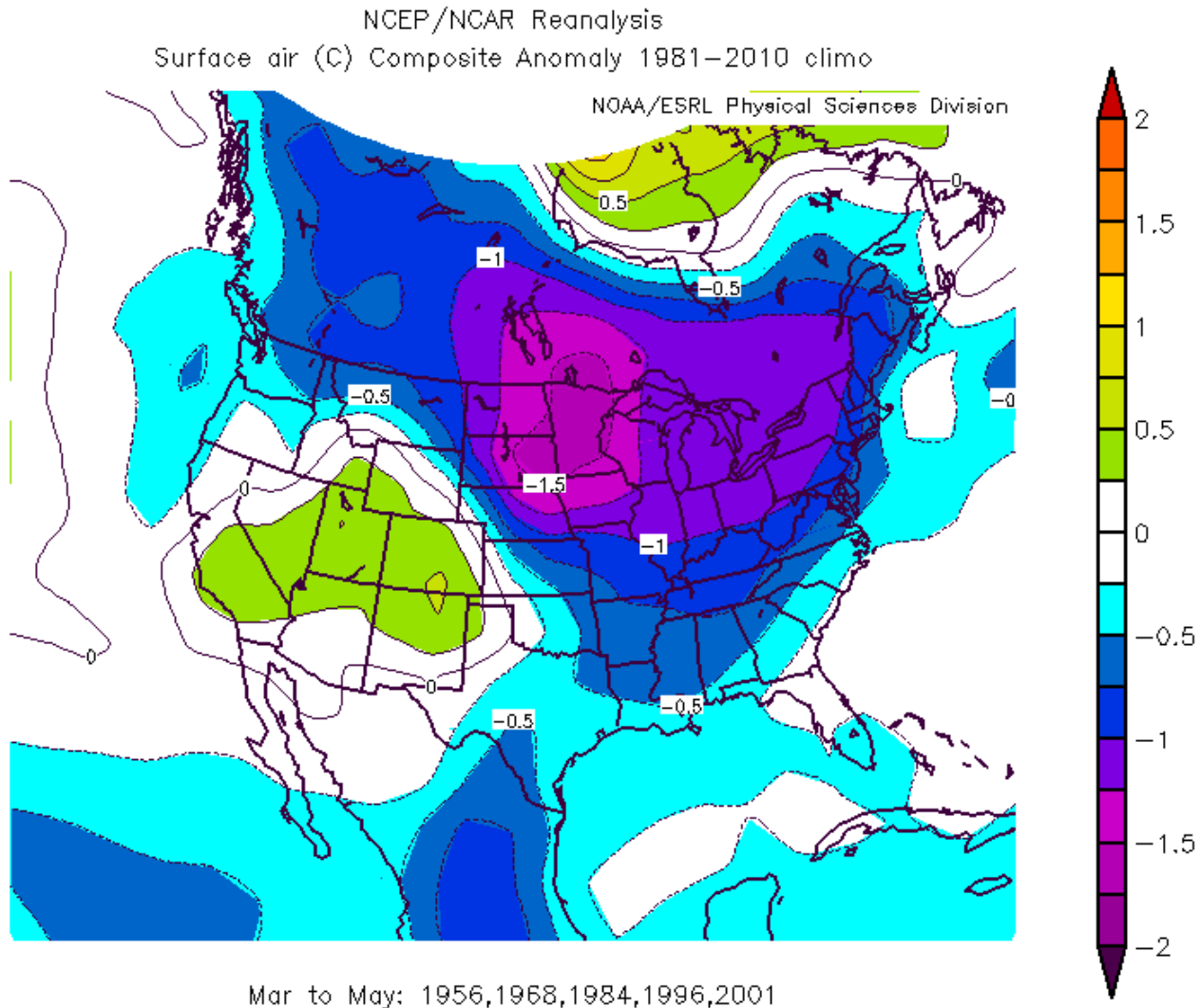
SPRING PATTERN
when LANina is
weakening to Neutral
and QBO is negative --

These SPRING patterns
feature Persistent
BLOCKING pattern over
Greenland & Persistent
large deep trough over
Midwest/ East coast



Mar to May: 1956,1968,1984,1996,2001

TEMP ANOMALIES FROM MARCH APRIL MAY 1956 1968 1984 1996 2001 -- DARN COLD everywhere EAST of the Rockies

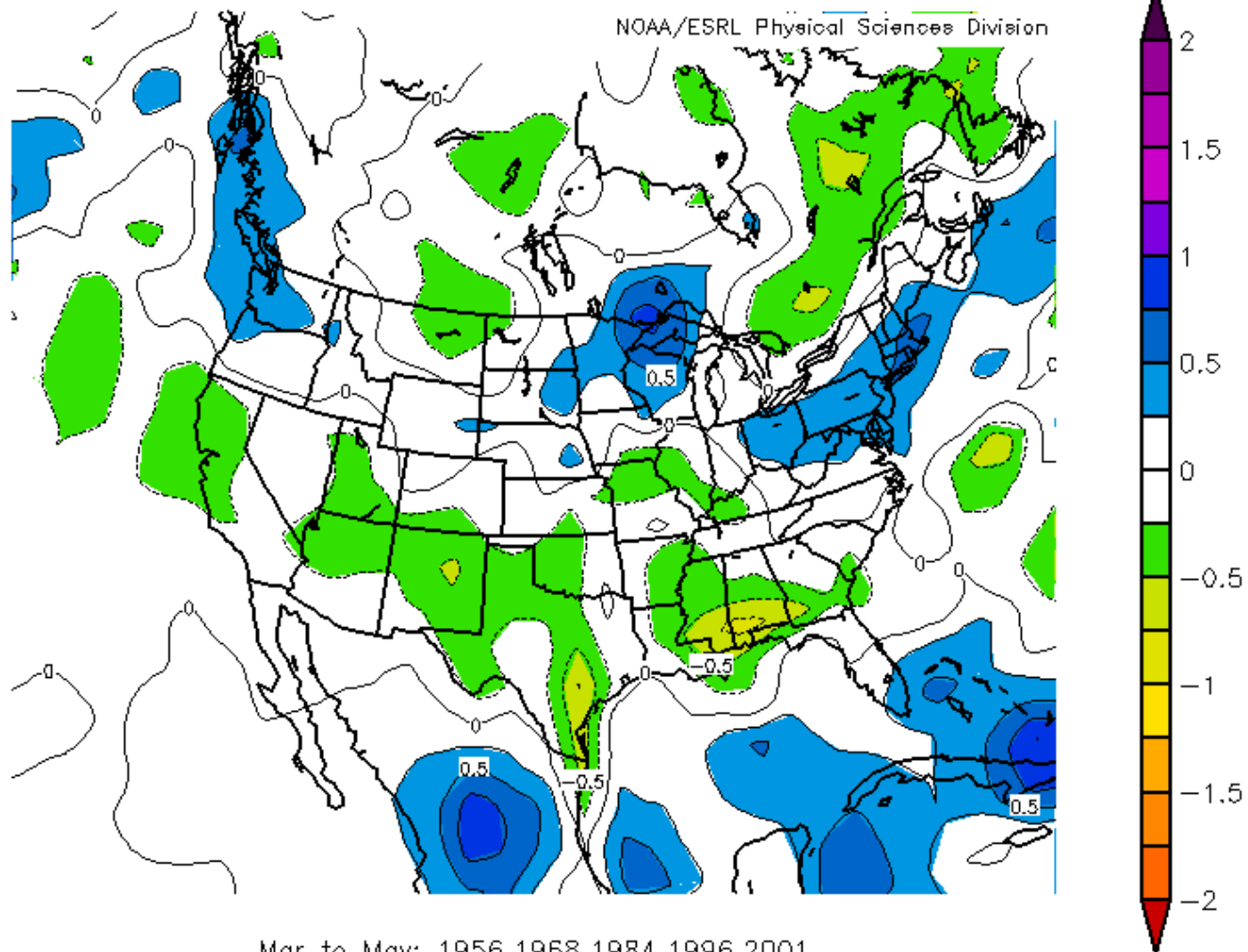


PRECIP ANOMALIES FROM MARCH APRIL MAY 1956 1968 1984 1996 2001 -- DRY over Lower Plains lower Midwest wet Upper Plains North WCB all fo ECB

NCEP/NCAR Reanalysis

Surface Precipitation Rate (mm/day) Composite Anomaly 1981–2010 climo

NOAA/ESRL Physical Sciences Division



Mar to May: 1956,1968,1984,1996,2001

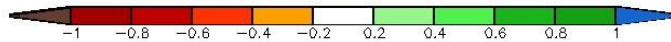
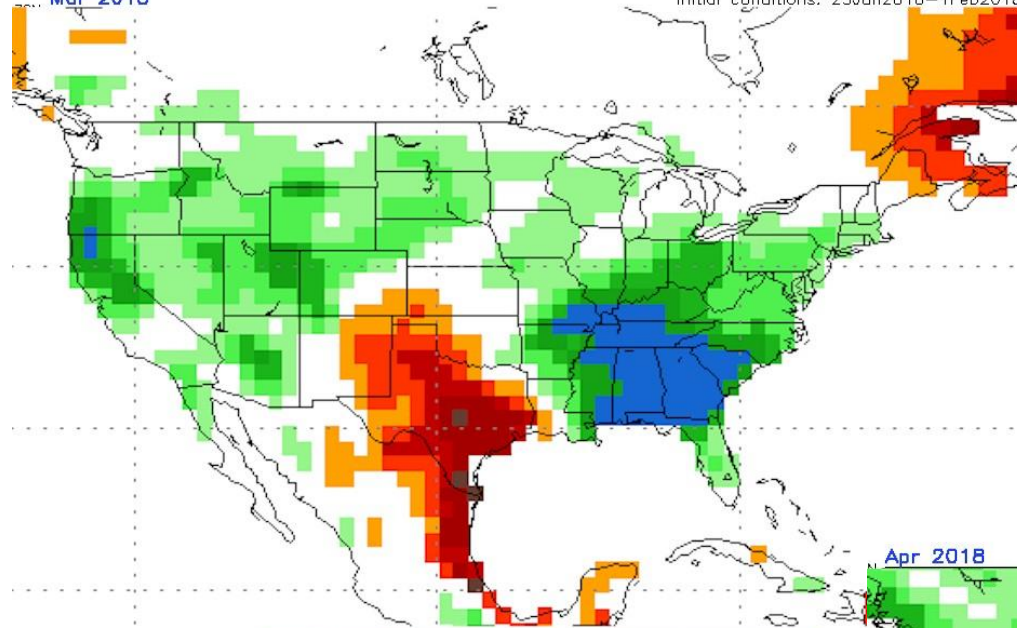
CFS MARCH & APRIL PRECIP ANOMALIES

CFSv2 monthly Prec anomalies (mm/day)

NWS/NCEP/CPC

Initial conditions: 23Jan2018-1Feb2018

Mar 2018

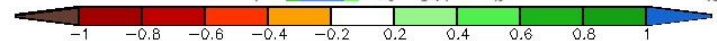
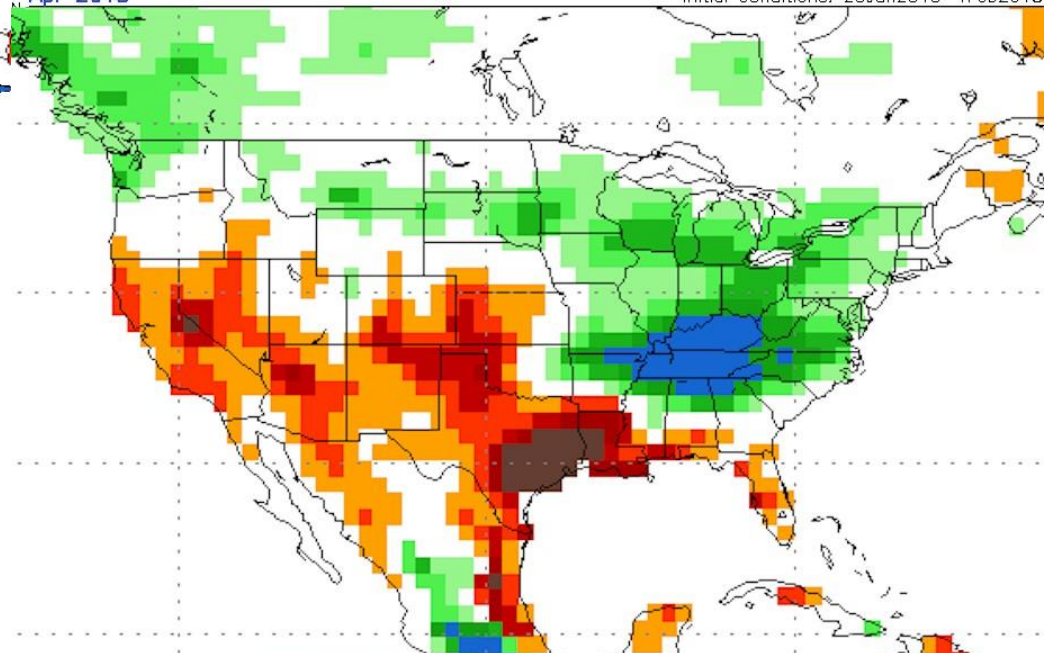


CFSv2 monthly Prec anomalies (mm/day)

NWS/NCEP/CPC

Initial conditions: 23Jan2018-1Feb2018

Apr 2018

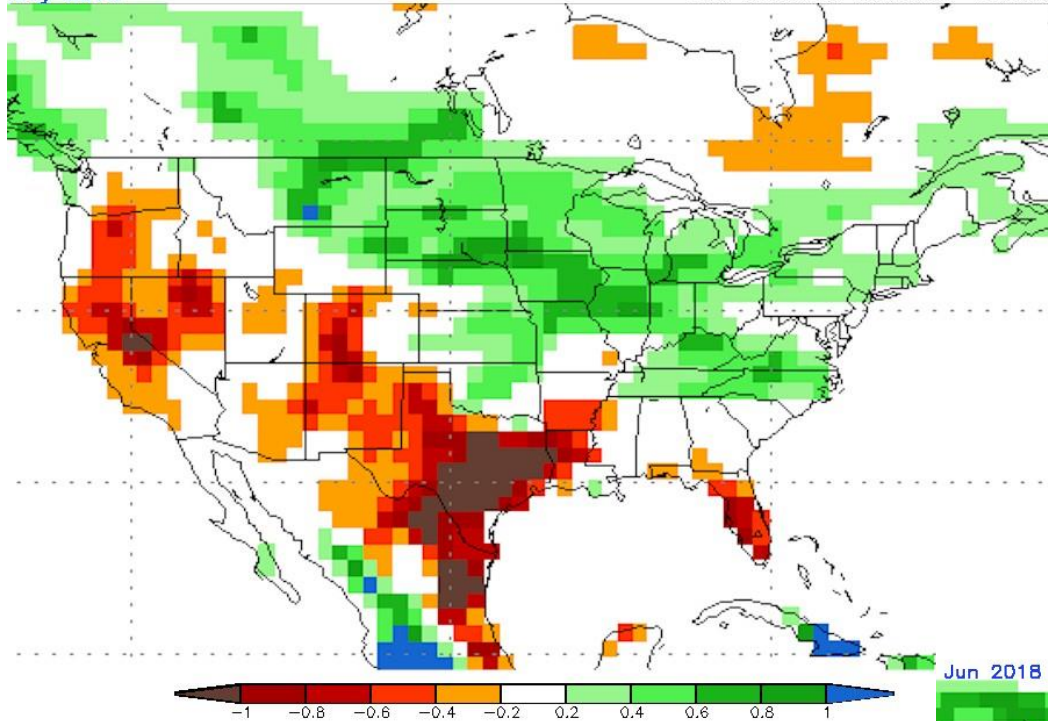


CFSv2 monthly Prec anomalies (mm/day)

NWS/NCEP/CPC

May 2018

Initial conditions: 23Jan2018-1Feb2018



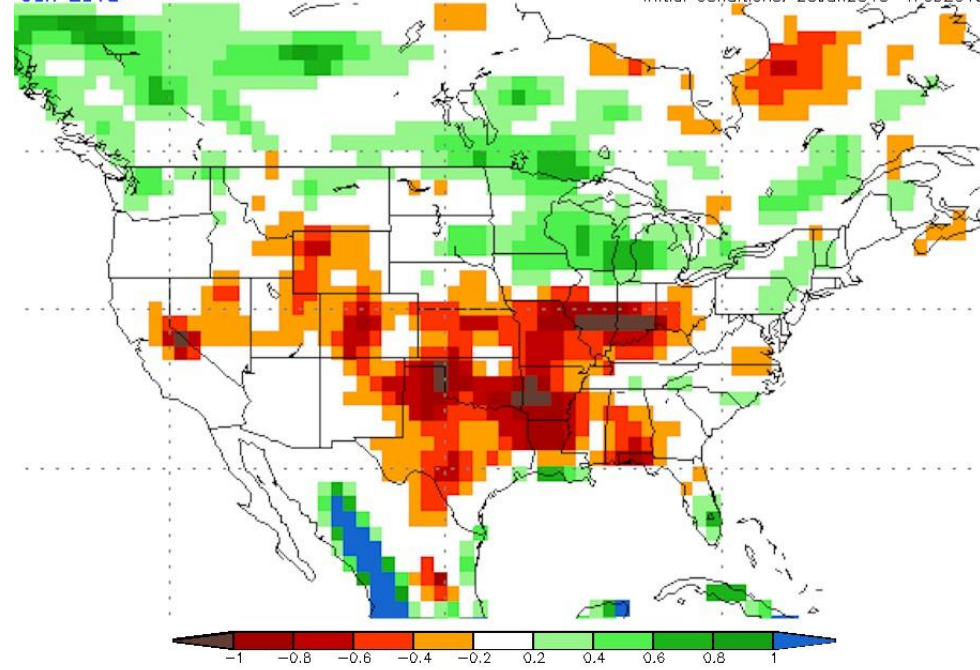
CFS MAY & JUNE PRECIP ANOMALIES

CFSv2 monthly Prec anomalies (mm/day)

NWS/NCEP/CPC

Jun 2018

Initial conditions: 23Jan2018-1Feb2018



SUMMARY CFS SAYS SPRING 2018 WET COLD FOR UPPER PLAINS ALL OF MIDWEST... BUT SEVWRE DROUGHT HOLDS ON OVER OK TX west KS east COL SUMMER very dry

