

**US HRWW / S.AMERICA  
GRAIN WEATHER  
ISSUES**

**as of FRIDAY  
16 FEBRUARY 2018**



LOCATED in Richmond VA

Featured frequently on AGRI-MONEY

**EMAIL WXRISK@VERZION .NET**



@WXRISK.COM



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

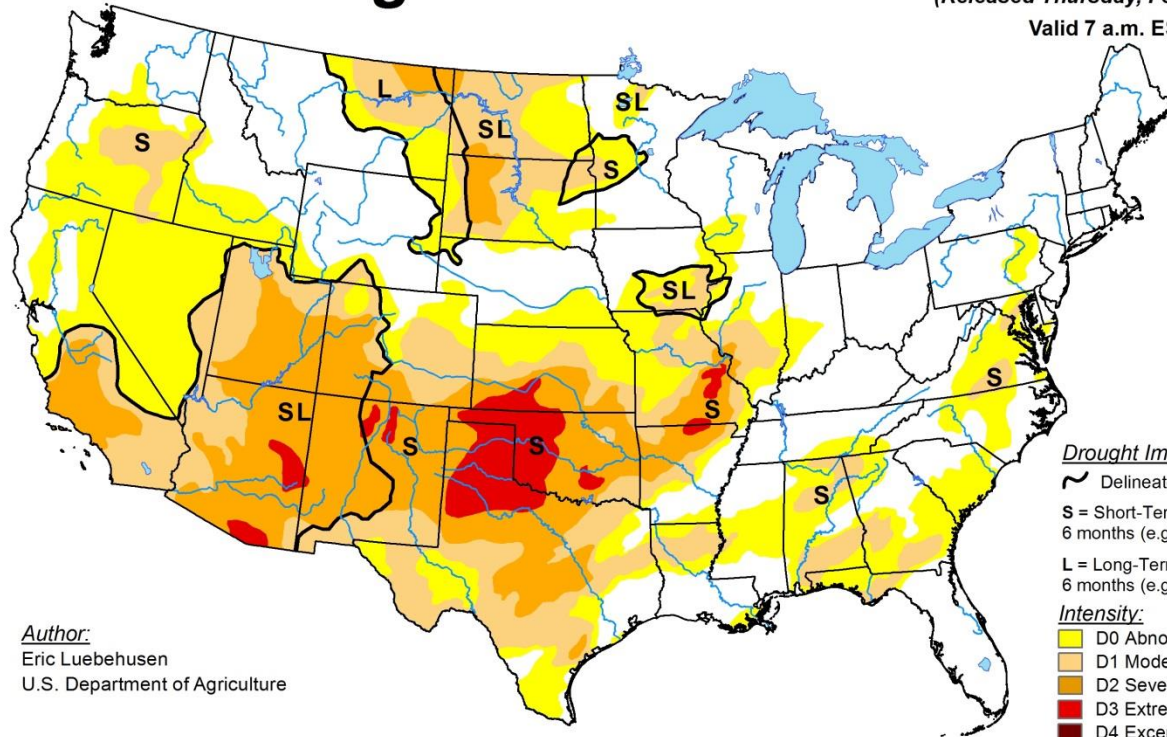
[wxrisk@gmail.com](mailto:wxrisk@gmail.com)



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

## U.S. Drought Monitor

February 13, 2018  
 (Released Thursday, Feb. 15, 2018)  
 Valid 7 a.m. EST



**Drought Impact Types:**

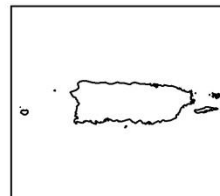
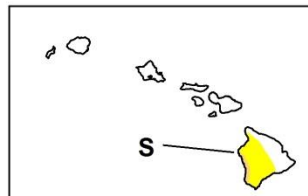
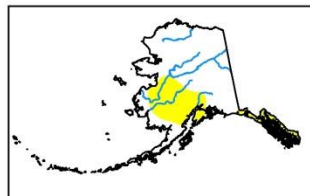
- ~ Delineates dominant impacts
- S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
- L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

**Intensity:**

- Yellow: D0 Abnormally Dry
- Light Orange: D1 Moderate Drought
- Orange: D2 Severe Drought
- Red: D3 Extreme Drought
- Dark Red: D4 Exceptional Drought

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

Author:  
 Eric Luebehusen  
 U.S. Department of Agriculture



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

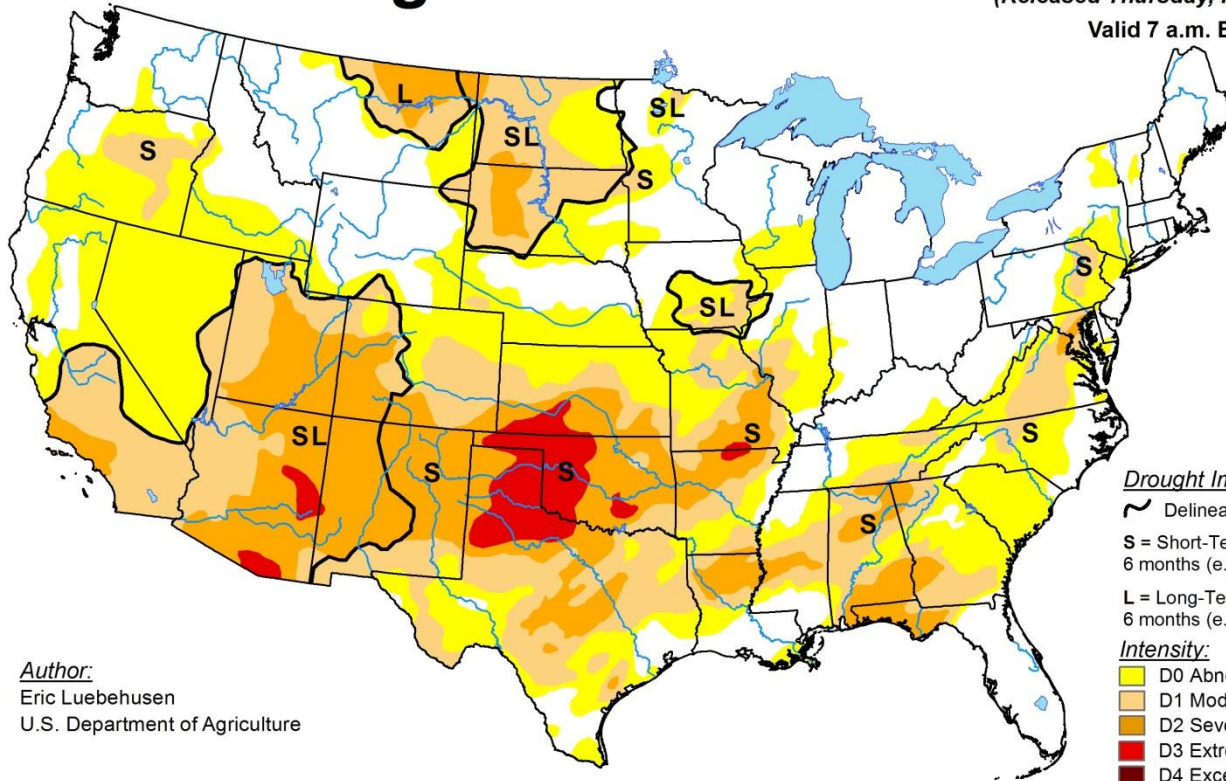


# LAST WEEK

## 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

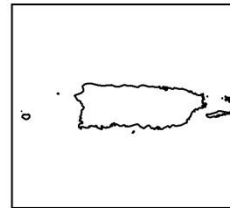
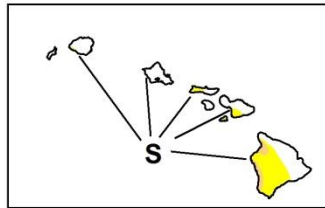
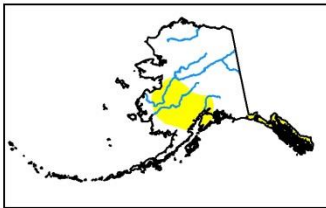
### Drought Impact Types:

- 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

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



**% OF AREA IN ANY DROUGHT D0-D4 = 11/14/17 was 401% but as of 2/15/18 = 75%**

**% OF AREA IN SERIOUS DROUGHT D2-D4 = 11/14/17 was 6% but as of 2/15/18 = 34%**

**U.S. Drought Monitor  
South**

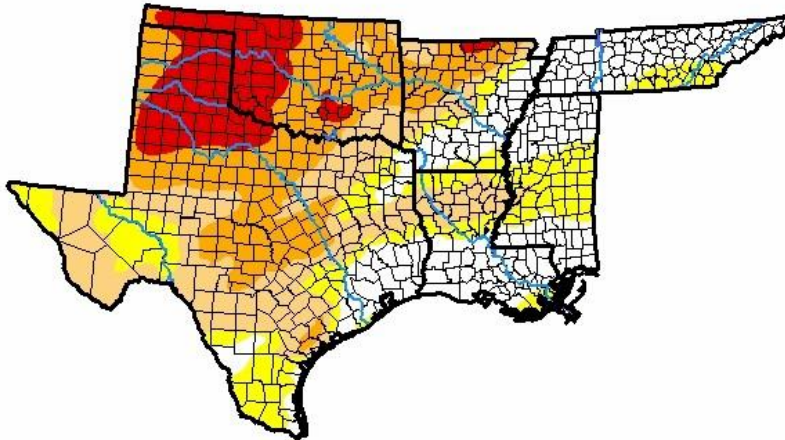
**February 13, 2018**

*(Released Thursday, Feb. 15, 2018)*

Valid 7 a.m. EST

*Drought Conditions (Percent Area)*

|  | None  | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4   |
|--|-------|-------|-------|-------|-------|------|
| <b>Current</b>                                     | 25.51 | 74.49 | 56.69 | 33.77 | 11.88 | 0.00 |
| <b>Last Week</b><br><i>02-06-2018</i>              | 15.03 | 84.97 | 61.93 | 33.11 | 11.22 | 0.00 |
| <b>3 Months Ago</b><br><i>11-14-2017</i>           | 50.58 | 49.42 | 21.39 | 5.79  | 0.00  | 0.00 |
| <b>Start of Calendar Year</b><br><i>01-02-2018</i> | 31.09 | 68.91 | 42.64 | 15.33 | 0.30  | 0.00 |
| <b>Start of Water Year</b><br><i>09-26-2017</i>    | 72.17 | 27.83 | 2.38  | 0.02  | 0.00  | 0.00 |
| <b>One Year Ago</b><br><i>02-14-2017</i>           | 65.65 | 34.35 | 17.36 | 6.62  | 0.92  | 0.00 |



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.*

Author:

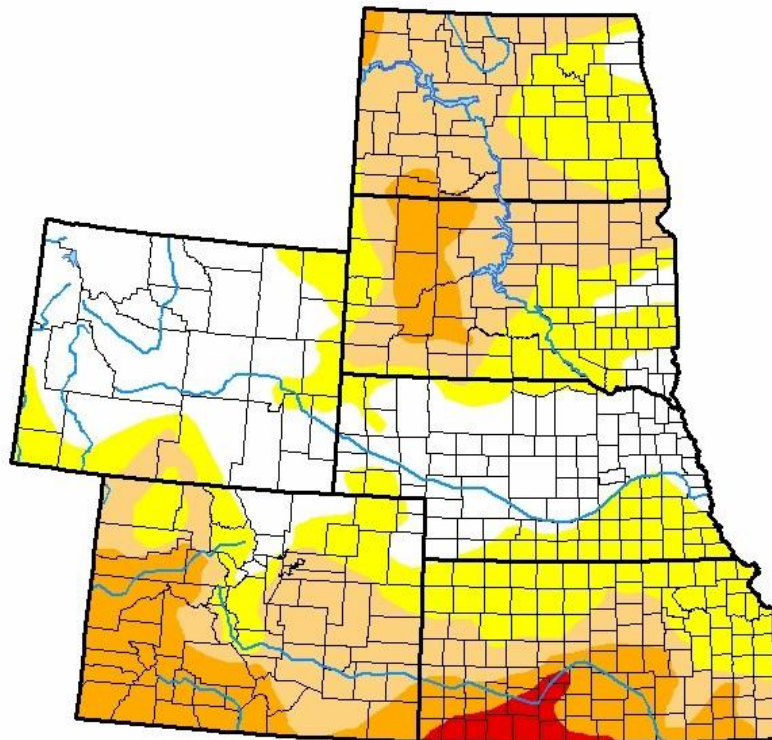
Eric Luebehusen  
U. S. Department of Agriculture



**% OF AREA IN ANY DROUGHT D0-D4 = 11/14/17 was 35% but as of 2/15/18 = 71%**  
**% OF AREA IN SERIOUS DROUGHT D2-D4 = 11/14/17 was 3% but as of 2/15/18 = 16%**

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

**February 13, 2018**  
 (Released Thursday, Feb. 15, 2018)  
 Valid 7 a.m. EST



*Drought Conditions (Percent Area)*

|  | None  | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4   |
|--|-------|-------|-------|-------|-------|------|
| <b>Current</b>                                     | 28.98 | 71.02 | 42.85 | 15.76 | 1.53  | 0.00 |
| <b>Last Week</b><br><i>02-06-2018</i>              | 21.65 | 78.35 | 44.12 | 15.41 | 1.53  | 0.00 |
| <b>3 Months Ago</b><br><i>11-14-2017</i>           | 64.94 | 35.06 | 13.64 | 3.26  | 0.90  | 0.00 |
| <b>Start of Calendar Year</b><br><i>01-02-2018</i> | 19.28 | 80.72 | 29.19 | 6.34  | 0.90  | 0.00 |
| <b>Start of Water Year</b><br><i>09-26-2017</i>    | 56.15 | 43.85 | 21.11 | 8.37  | 1.32  | 0.06 |
| <b>One Year Ago</b><br><i>02-14-2017</i>           | 63.16 | 36.84 | 18.95 | 1.23  | 0.00  | 0.00 |

Intensity:

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

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Author:

Eric Luebehusen  
 U.S. Department of Agriculture



**% OF AREA IN ANY DROUGHT D0-D4 = 11/14/17 was 22% but as of 2/14/18 = 35%**

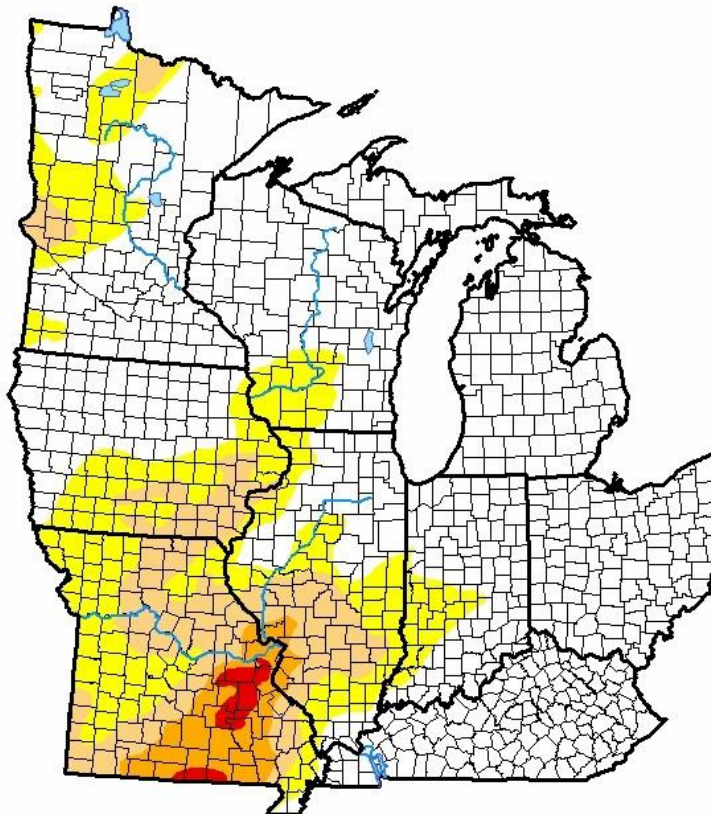
**% OF AREA IN SERIOUS DROUGHT D2-D4 = 11/14/17 was 0% but as of 2/14/18 = 3%**

**U.S. Drought Monitor  
Midwest**

**February 13, 2018**

*(Released Thursday, Feb. 15, 2018)*

Valid 7 a.m. EST



*Drought Conditions (Percent Area)*

|  | None  | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4   |
|--|-------|-------|-------|-------|-------|------|
| <b>Current</b>                                     | 66.88 | 33.12 | 14.42 | 4.05  | 0.78  | 0.00 |
| <b>Last Week</b><br><i>02-06-2018</i>              | 64.28 | 35.72 | 13.04 | 3.44  | 0.18  | 0.00 |
| <b>3 Months Ago</b><br><i>11-14-2017</i>           | 81.68 | 18.32 | 6.76  | 2.40  | 0.00  | 0.00 |
| <b>Start of Calendar Year</b><br><i>01-02-2018</i> | 69.93 | 30.07 | 9.46  | 3.44  | 0.18  | 0.00 |
| <b>Start of Water Year</b><br><i>09-26-2017</i>    | 58.41 | 41.59 | 8.86  | 0.77  | 0.25  | 0.00 |
| <b>One Year Ago</b><br><i>02-14-2017</i>           | 84.69 | 15.31 | 4.06  | 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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Author:

Eric Luebehusen  
U.S. Department of Agriculture



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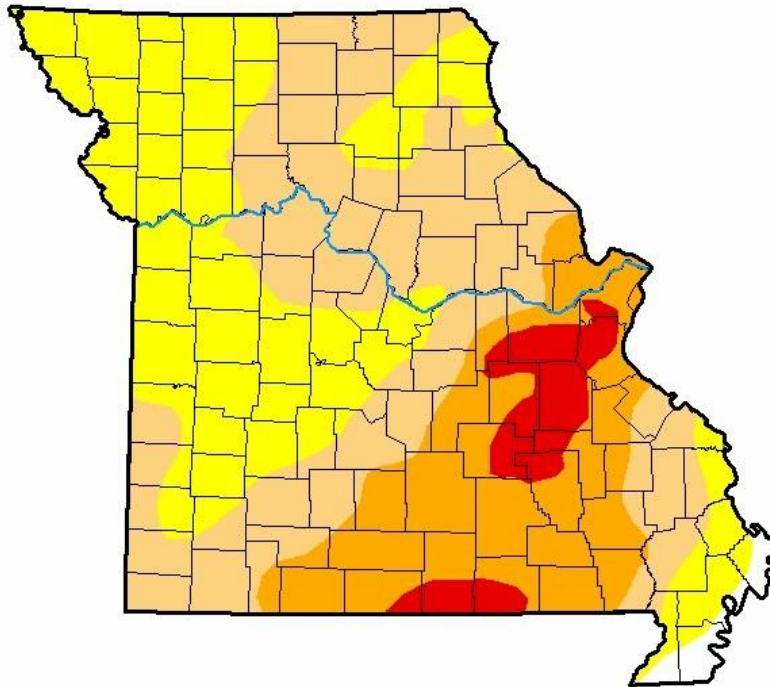


**% OF AREA IN ANY DROUGHT D0-D4 = 11/14/17 was 61% but as of 2/14/18 = 99%**

**% OF AREA IN SERIOUS DROUGHT D2-D4 = 11/14/17 was 16% but as of 2/14/18 = 26%**

**U.S. Drought Monitor  
Missouri**

**February 13, 2018**  
(Released Thursday, Feb. 15, 2018)  
Valid 7 a.m. EST



*Drought Conditions (Percent Area)*

|  | None  | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4   |
|--|-------|-------|-------|-------|-------|------|
| <b>Current</b>                                     | 1.45  | 98.55 | 63.22 | 26.02 | 5.59  | 0.00 |
| <b>Last Week</b><br><i>02-06-2018</i>              | 1.40  | 98.60 | 61.86 | 23.59 | 1.29  | 0.00 |
| <b>3 Months Ago</b><br><i>11-14-2017</i>           | 38.37 | 61.63 | 37.03 | 16.64 | 0.00  | 0.00 |
| <b>Start of Calendar Year</b><br><i>01-02-2018</i> | 1.49  | 98.51 | 46.34 | 23.68 | 1.29  | 0.00 |
| <b>Start of Water Year</b><br><i>09-26-2017</i>    | 35.49 | 64.51 | 8.80  | 0.00  | 0.00  | 0.00 |
| <b>One Year Ago</b><br><i>02-14-2017</i>           | 11.01 | 88.99 | 26.71 | 0.00  | 0.00  | 0.00 |

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.*

Author:

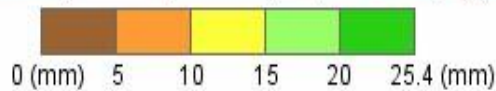
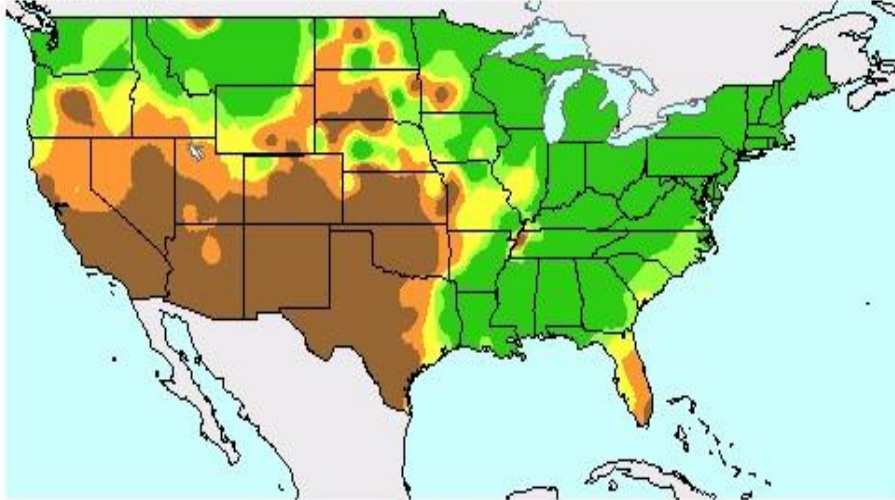
Eric Luebehusen  
U.S. Department of Agriculture



# GENERAL OVER VIEW OF SOIL MOISTURE ANOMALIES AND SURFACE AND SUB SURFACE

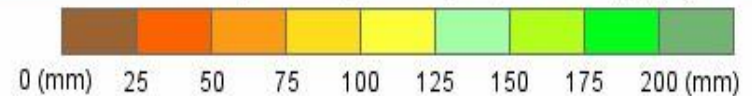
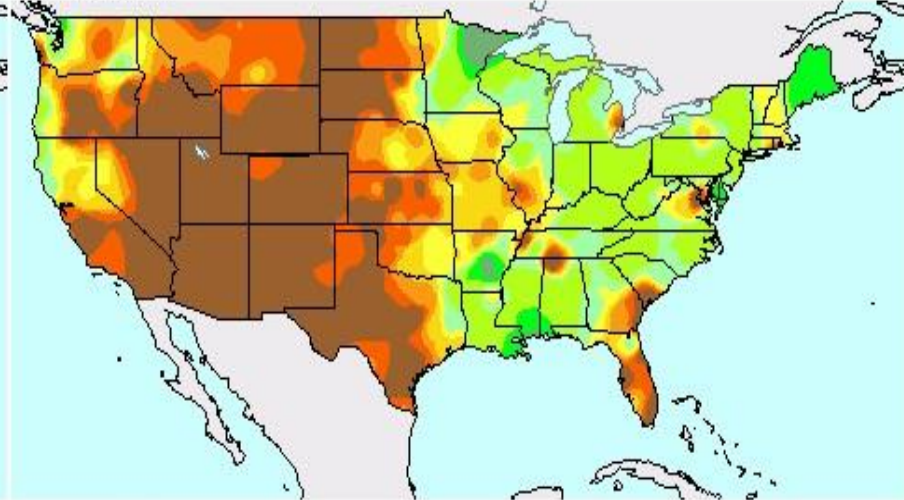
Surface Soil Moisture (WMO)

Feb. 11, 2018




Subsurface Soil Moisture (WMO)

Feb. 11, 2018



 Foreign Agricultural Service  
Office of Global Analysis  
International Production Assessment Division

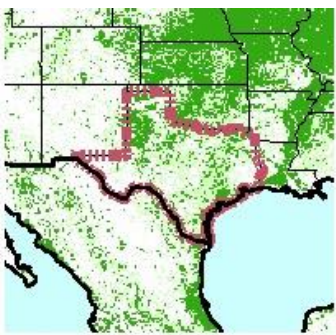
Source: World Meteorological Organization  
<http://www.nws.noaa.gov/fscs/fnwsqtfs.html>

 Foreign Agricultural Service  
Office of Global Analysis  
International Production Assessment Division

Source: World Meteorological Organization  
<http://www.nws.noaa.gov/fscs/fnwsqtfs.html>

Top

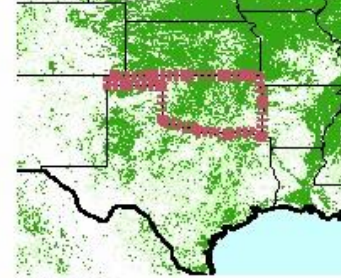
## LEYS BREAK THIS DOWN STATE BY STATE



**TX**

Texas

[View Satellite Image](#)

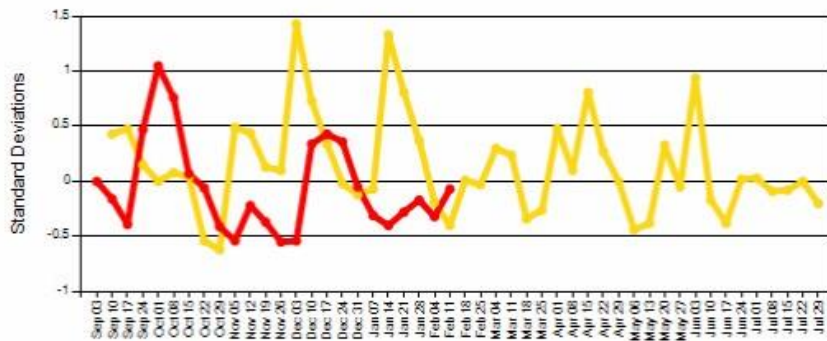


**OK**

Oklahoma

[View Satellite Image](#)

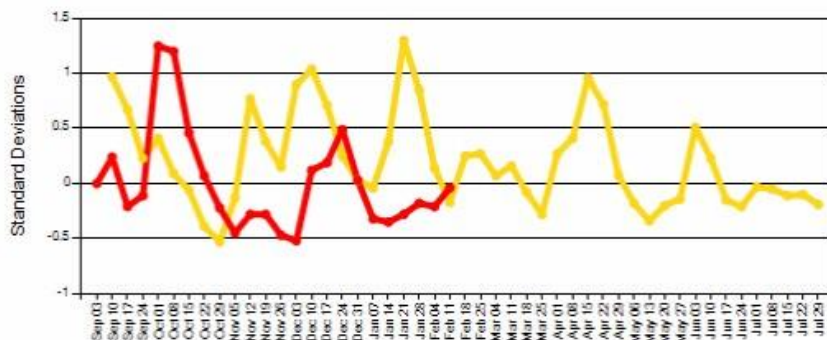
Surface Soil Moisture Anomaly (SMOS) in Texas



Source: NASA/GSFC/HSB; USAF 557th WW

— 2017 / 2018 — 2016 / 2017

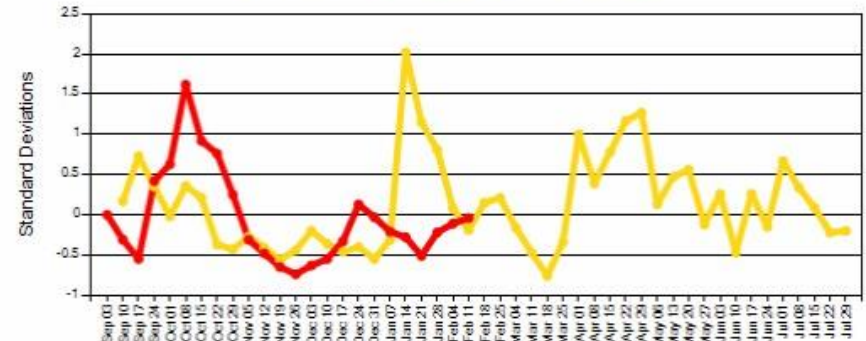
Subsurface Soil Moisture Anomaly (SMOS) in Texas



Source: NASA/GSFC/HSB; USAF 557th WW

— 2017 / 2018 — 2016 / 2017

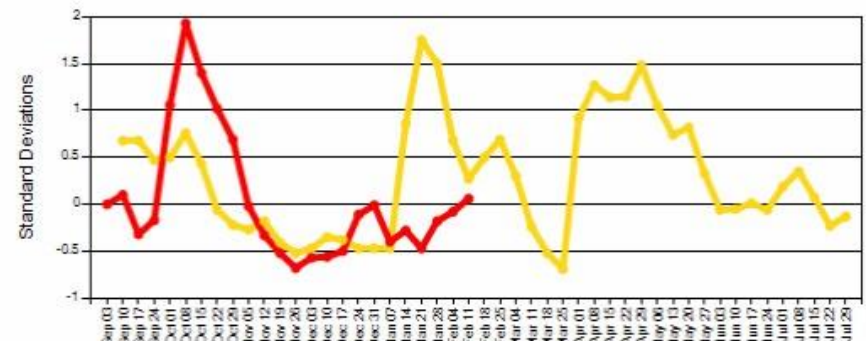
Surface Soil Moisture Anomaly (SMOS) in Oklahoma



Source: NASA/GSFC/HSB; USAF 557th WW

— 2017 / 2018 — 2016 / 2017

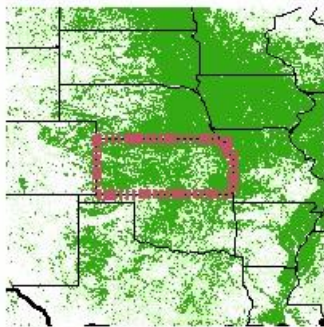
Subsurface Soil Moisture Anomaly (SMOS) in Oklahoma



Source: NASA/GSFC/HSB; USAF 557th WW

— 2017 / 2018 — 2016 / 2017



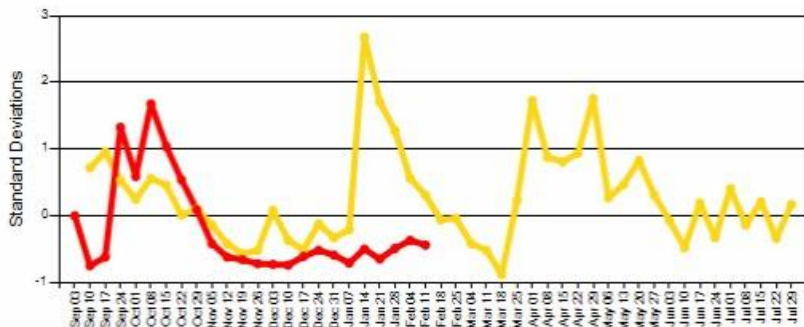


# KS

Kansas

[View Satellite Image](#)

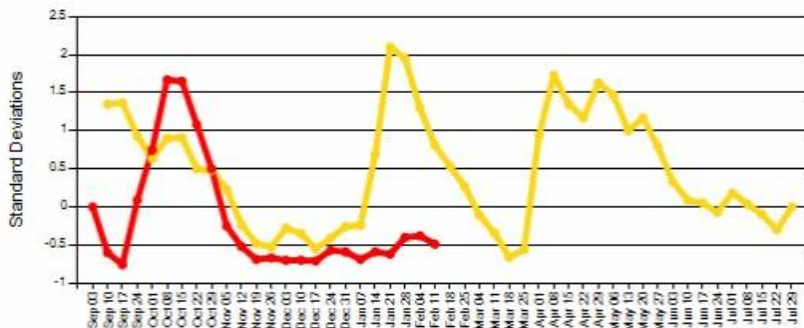
Surface Soil Moisture Anomaly (SMOS) in Kansas



Source: NASA/GSFC/HSB; USAF 557th WW

— 2017 / 2018 — 2016 / 2017

Subsurface Soil Moisture Anomaly (SMOS) in Kansas



Source: NASA/GSFC/HSB; USAF 557th WW

— 2017 / 2018 — 2016 / 2017

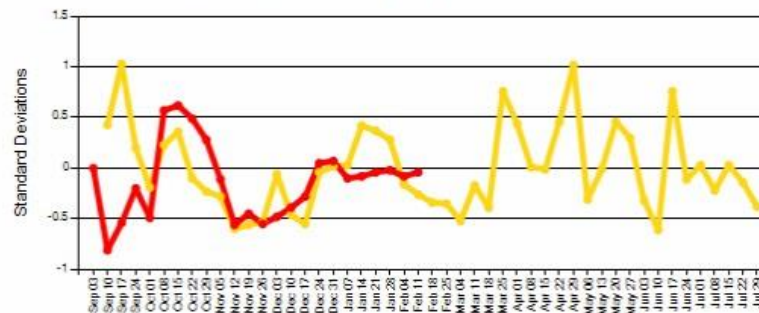
# MO



Missouri

[View Satellite Image](#)

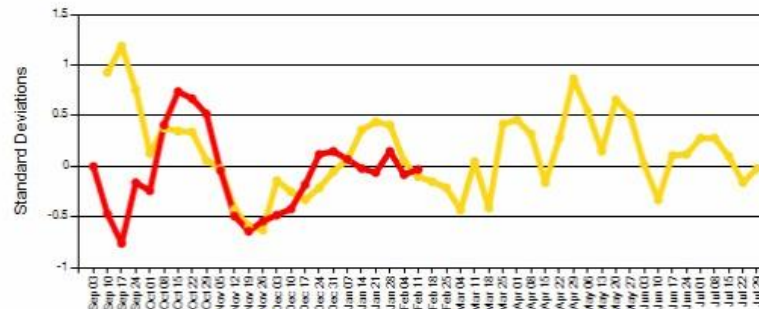
Surface Soil Moisture Anomaly (SMOS) in Missouri



Source: NASA/GSFC/HSB; USAF 557th WW

— 2017 / 2018 — 2016 / 2017

Subsurface Soil Moisture Anomaly (SMOS) in Missouri



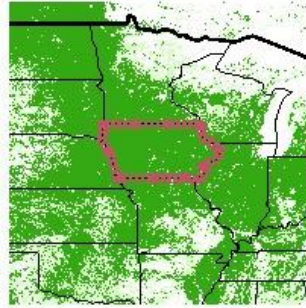
Source: NASA/GSFC/HSB; USAF 557th WW

— 2017 / 2018 — 2016 / 2017

Iowa

(Last Chart Update - 02/11/18)

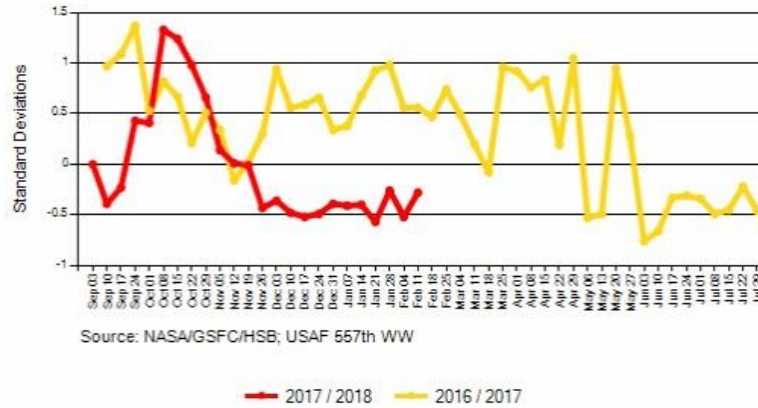
**IA**



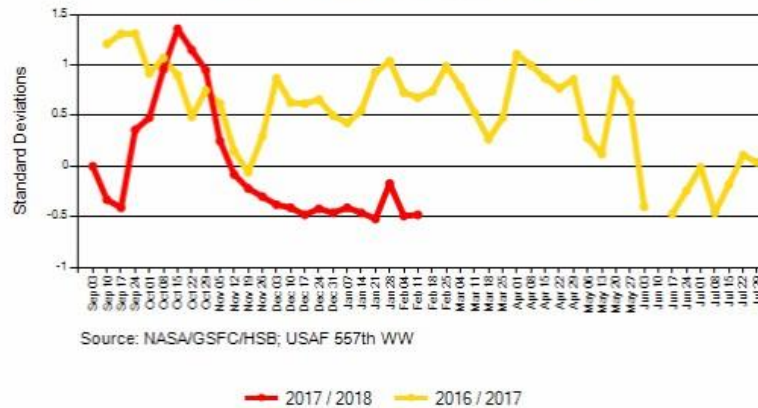
Iowa

[View Satellite Image](#)

Surface Soil Moisture Anomaly (SMOS) in Iowa



Subsurface Soil Moisture Anomaly (SMOS) in Iowa



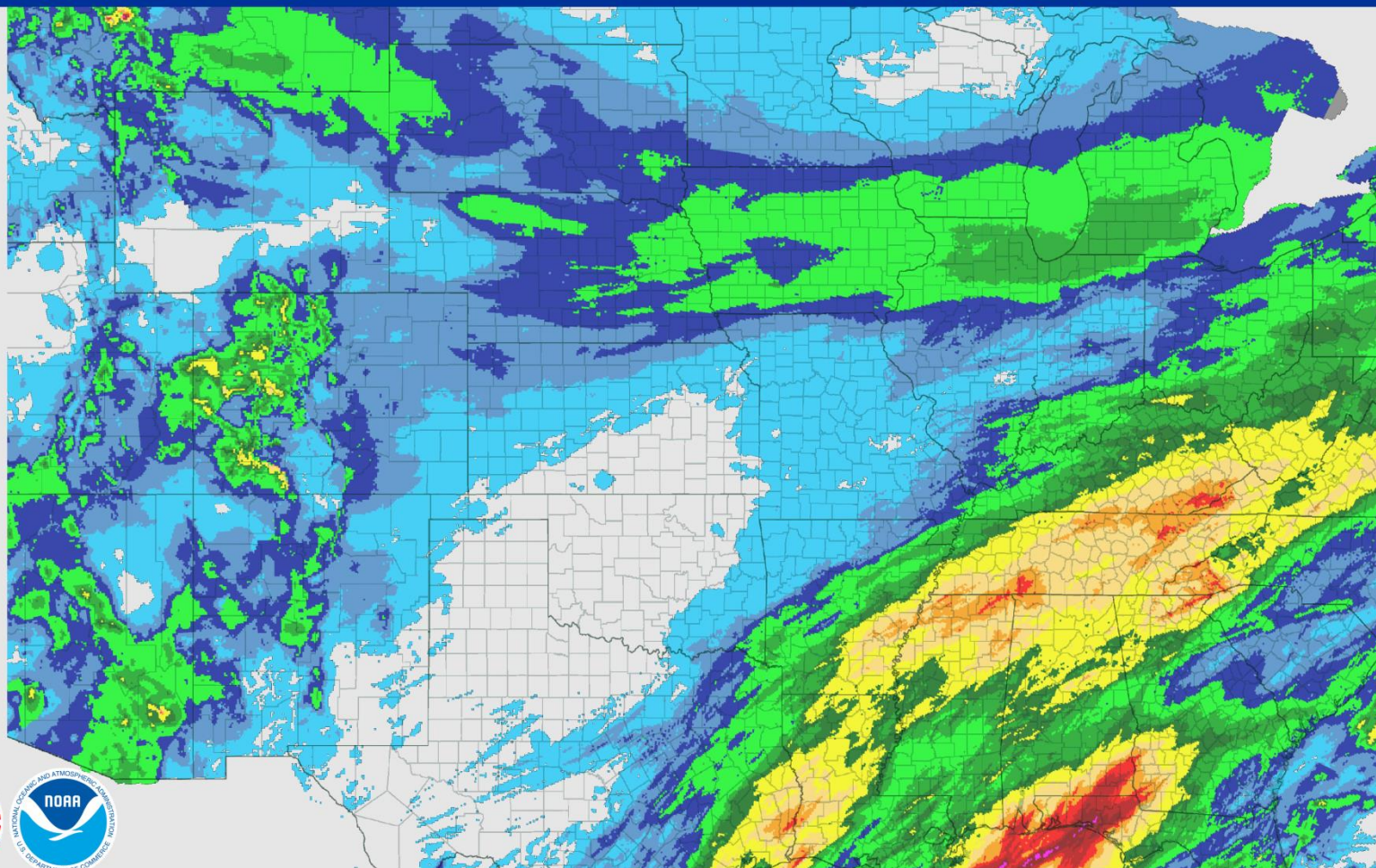


# ACTUAL PRECIP PAST 7 DAYS

February 15, 2018 7-Day Observed Precipitation

Created on: February 16, 2018 - 06:46 UTC

Valid on: February 15, 2018 12:00 UTC



Inches

20

15

10

8.0

6.0

5.0

4.0

3.0

2.0

1.5

1.0

.50

.25

.10

.01

?



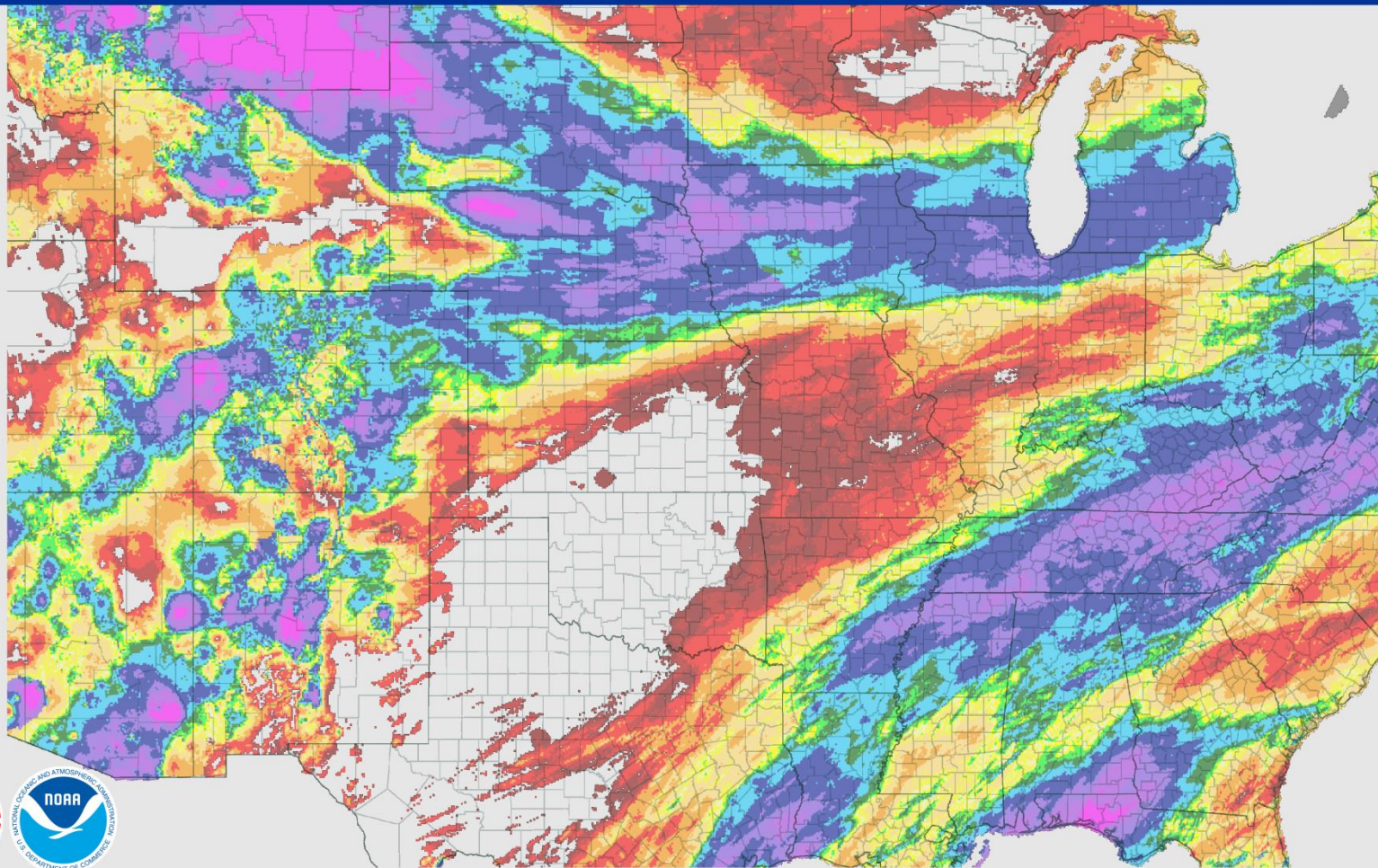


# PRECIP PAST 7 DAYS

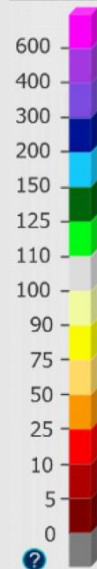
February 15, 2018 7-Day Percent Precipitation

Created on: February 16, 2018 - 06:48 UTC

Valid on: February 15, 2018 12:00 UTC



Percent



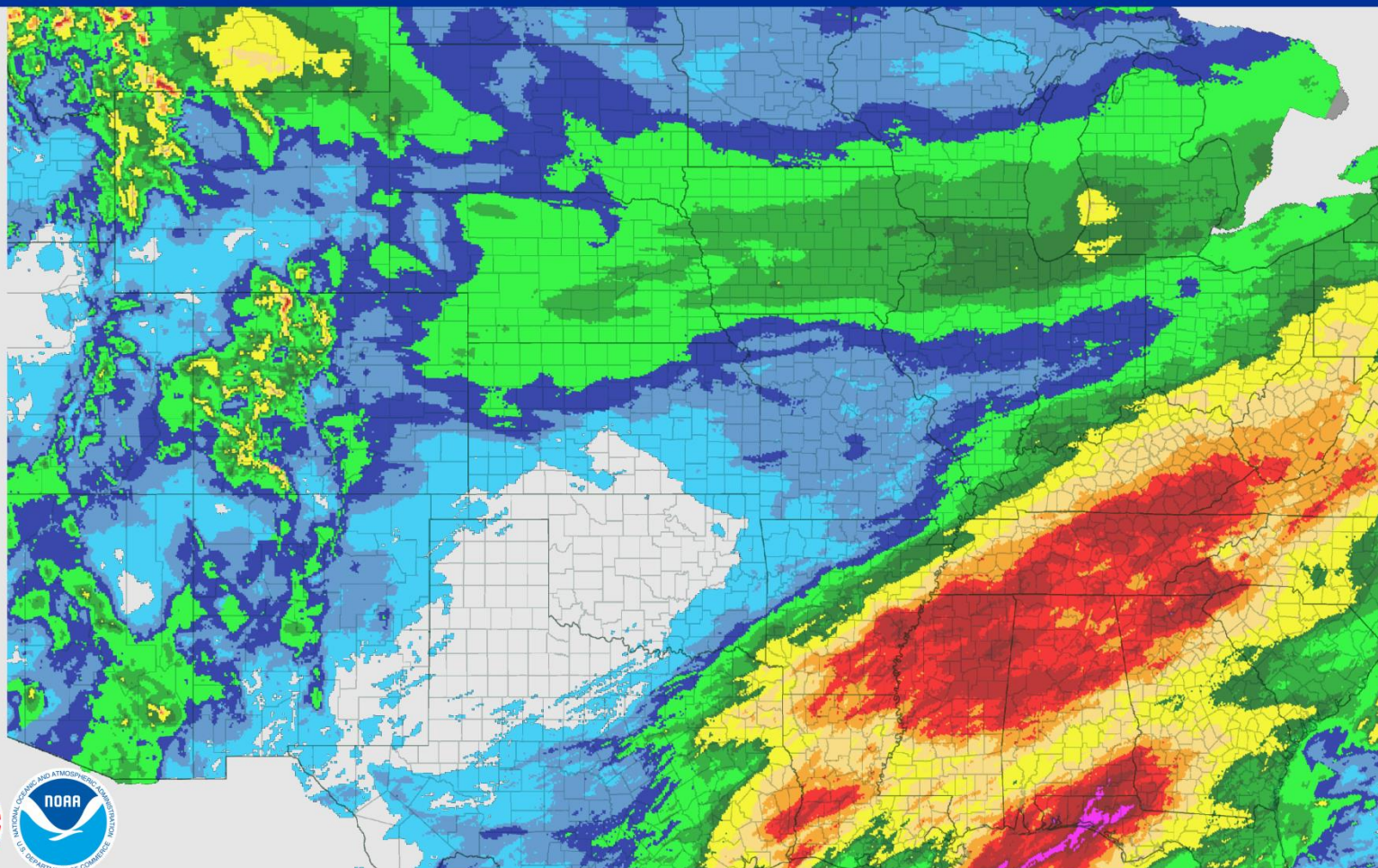


# ACTUAL PRECIP PAST 14 DAYS

February 15, 2018 14-Day Observed Precipitation

Created on: February 16, 2018 - 06:48 UTC

Valid on: February 15, 2018 12:00 UTC



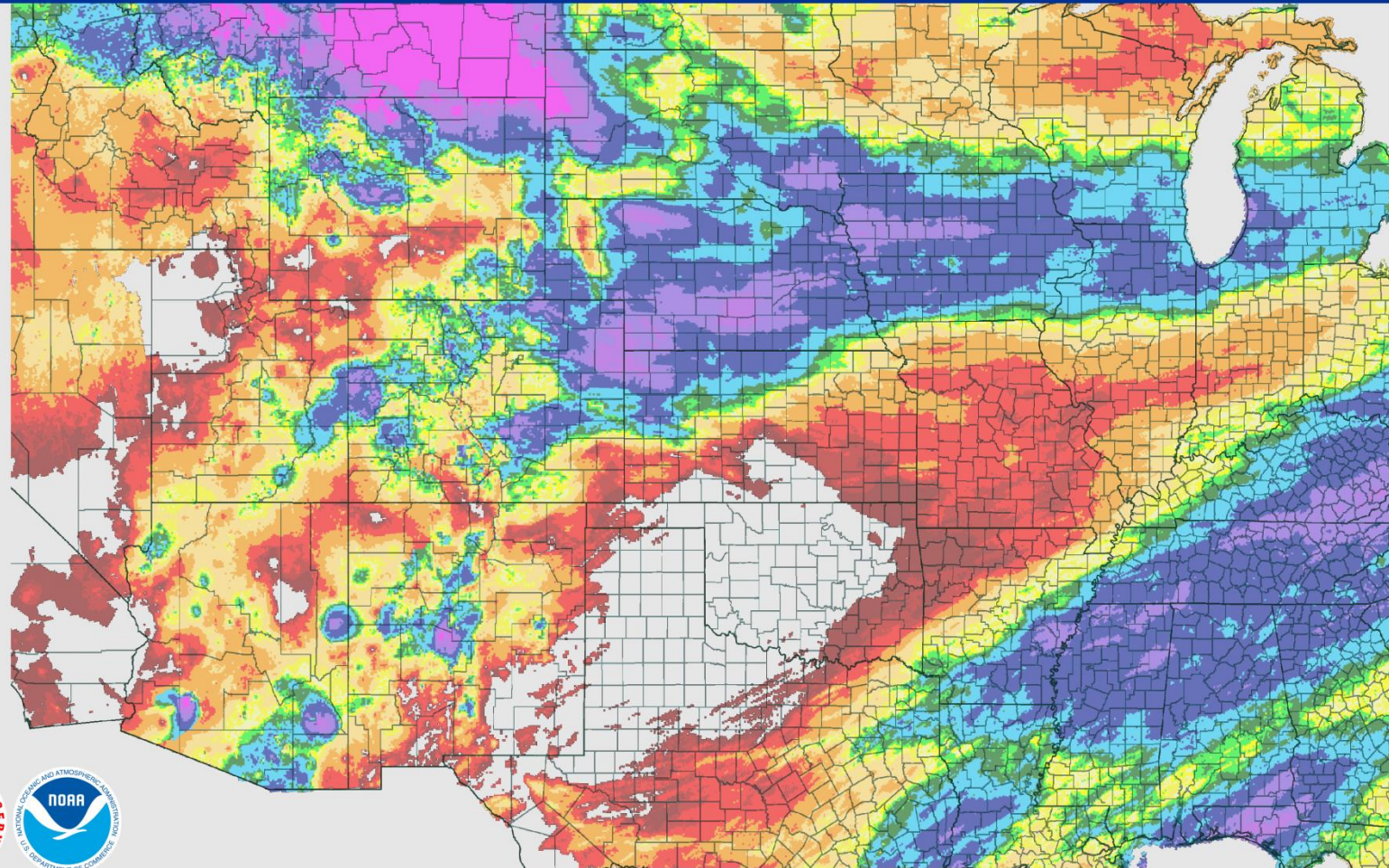


# RAINFALL ANOMALIES PAST 14 DAYS

February 15, 2018 14-Day Percent Precipitation

Created on: February 16, 2018 - 12:54 UTC

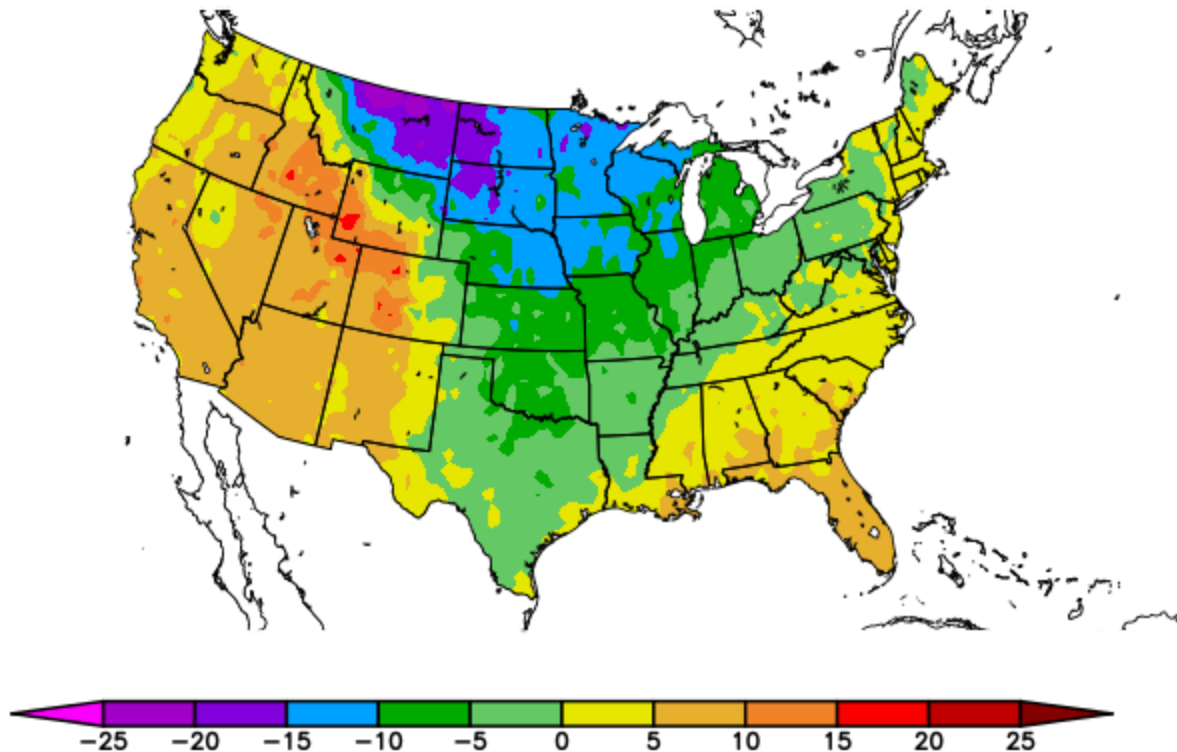
Valid on: February 15, 2018 12:00 UTC





# RAINFALL AMOUNTS AND ANOMALIES PAST 7 DAYS

Departure from Normal Temperature (F)  
2/1/2018 - 2/14/2018

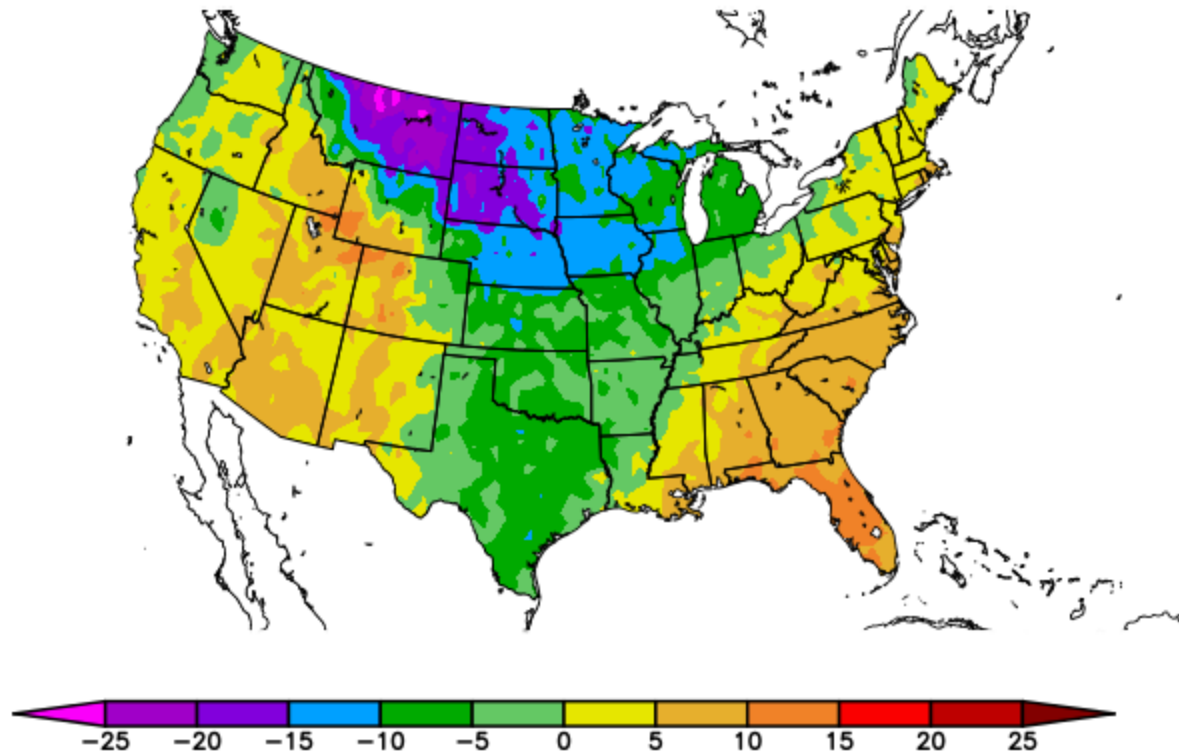


Generated 2/15/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers

# PAST 14AYS TEMP ANOMALIES

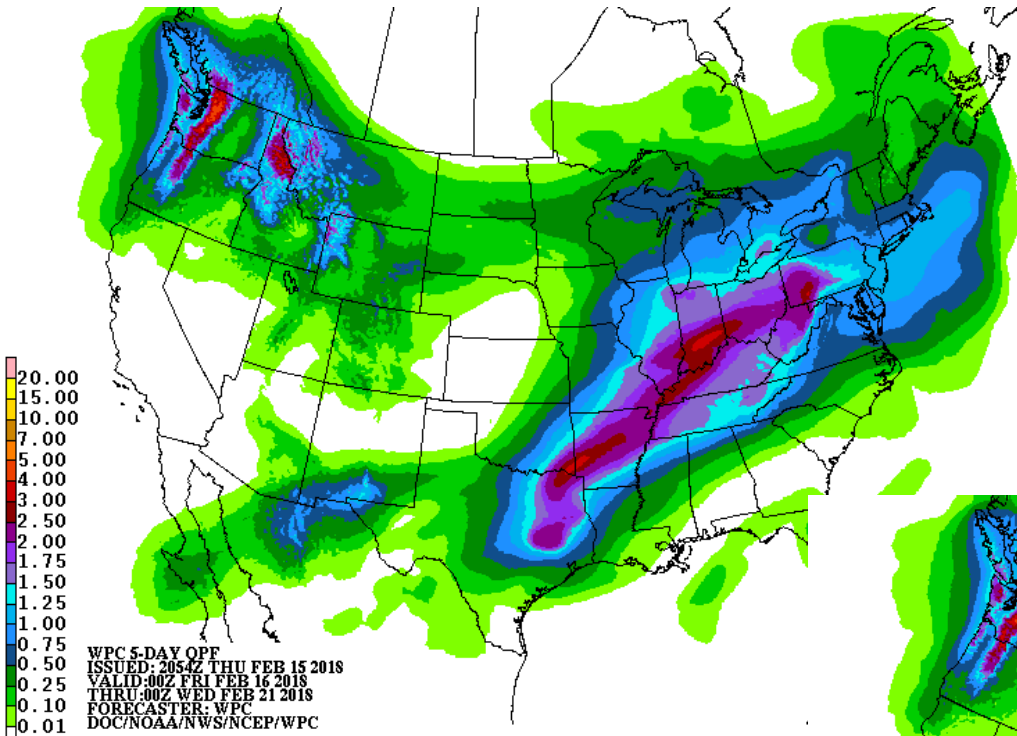
Departure from Normal Temperature (F)  
2/8/2018 - 2/14/2018



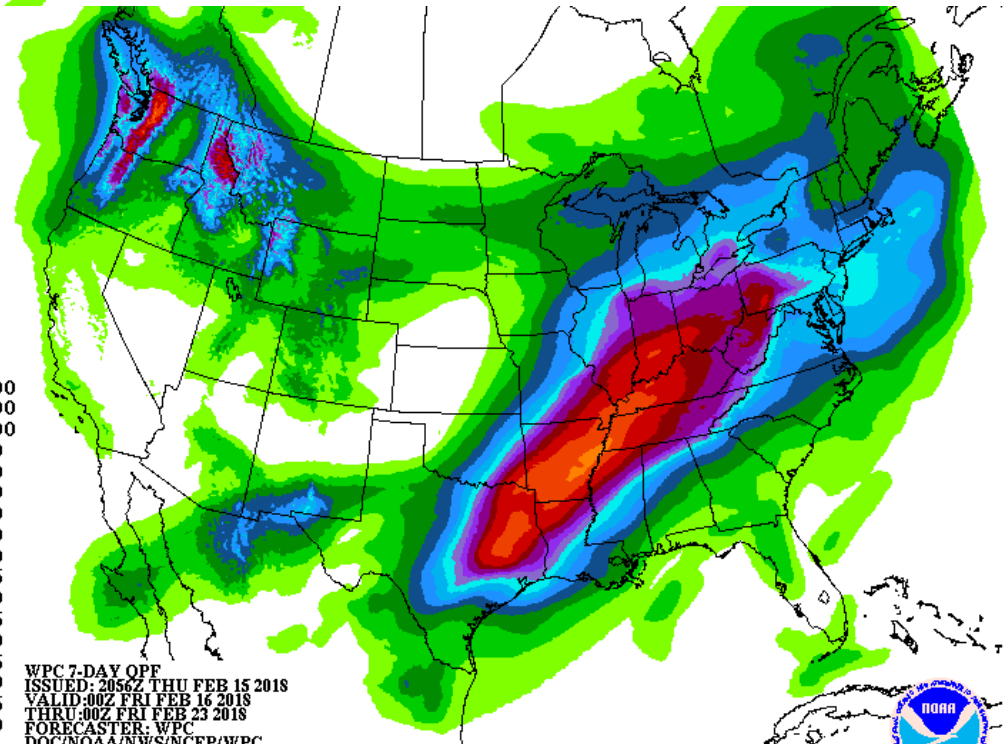
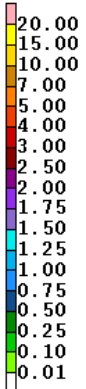
Generated 2/15/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers

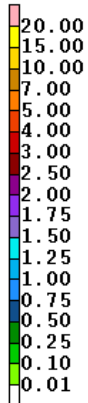
# NWS OFFICIAL RAINFALL NEXT 7 DAYS



WPC 5-DAY OFF  
ISSUED: 2054Z THU FEB 15 2018  
VALID:00Z FRI FEB 16 2018  
THRU:00Z WED FEB 21 2018  
FORECASTER: WPC  
DOC/NOAA/NWS/NCEP/WPC



WPC 7-DAY OFF  
ISSUED: 2056Z THU FEB 15 2018  
VALID:00Z FRI FEB 16 2018  
THRU:00Z FRI FEB 23 2018  
FORECASTER: WPC  
DOC/NOAA/NWS/NCEP/WPC



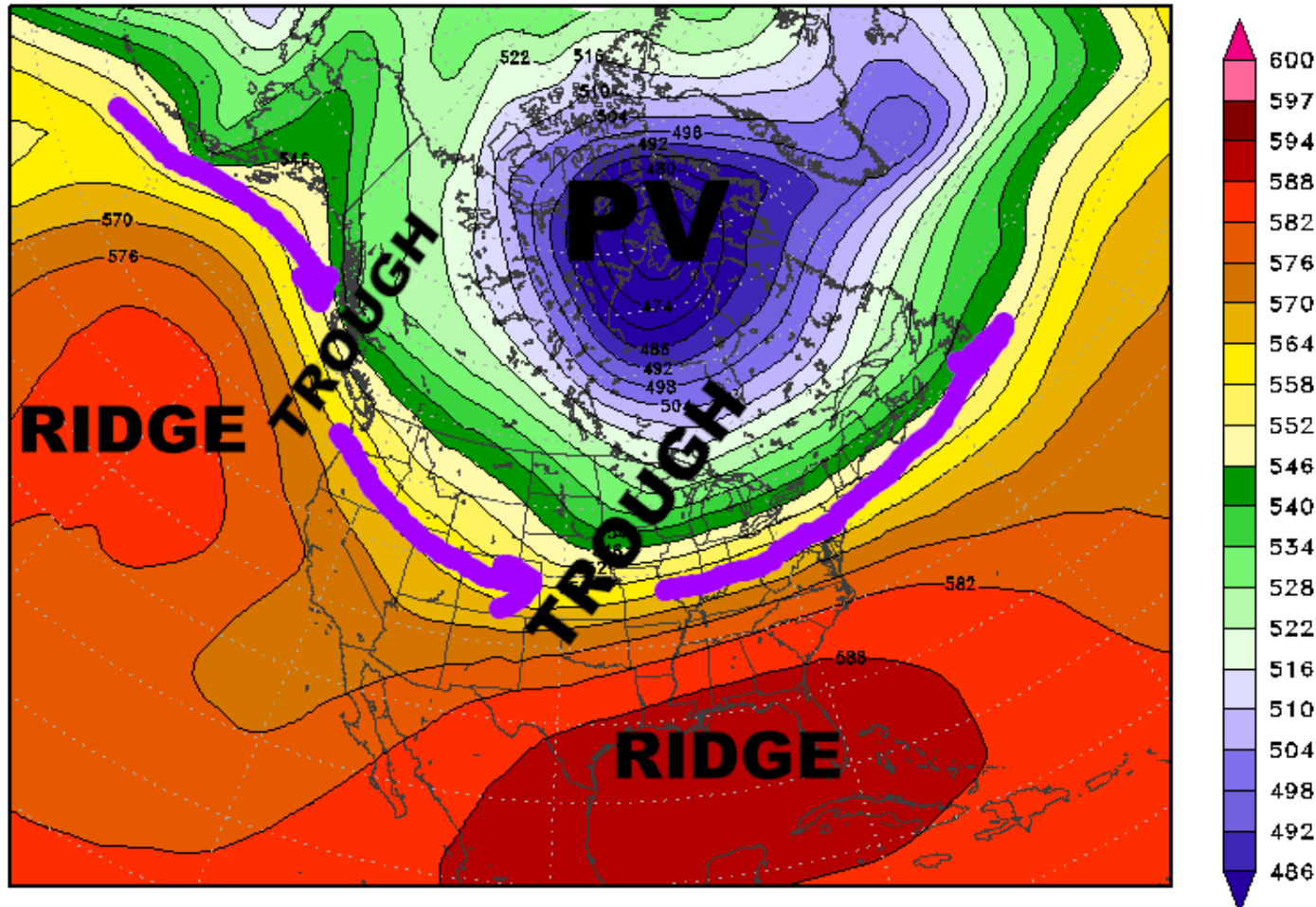


# CURRNET JET STREAM PATTERN FEB 16 .. Very strong Polar Vortex (PV) over Hudson Bay Canada but with pacific Jet stream dominating there is no path for winter cold to come into conus

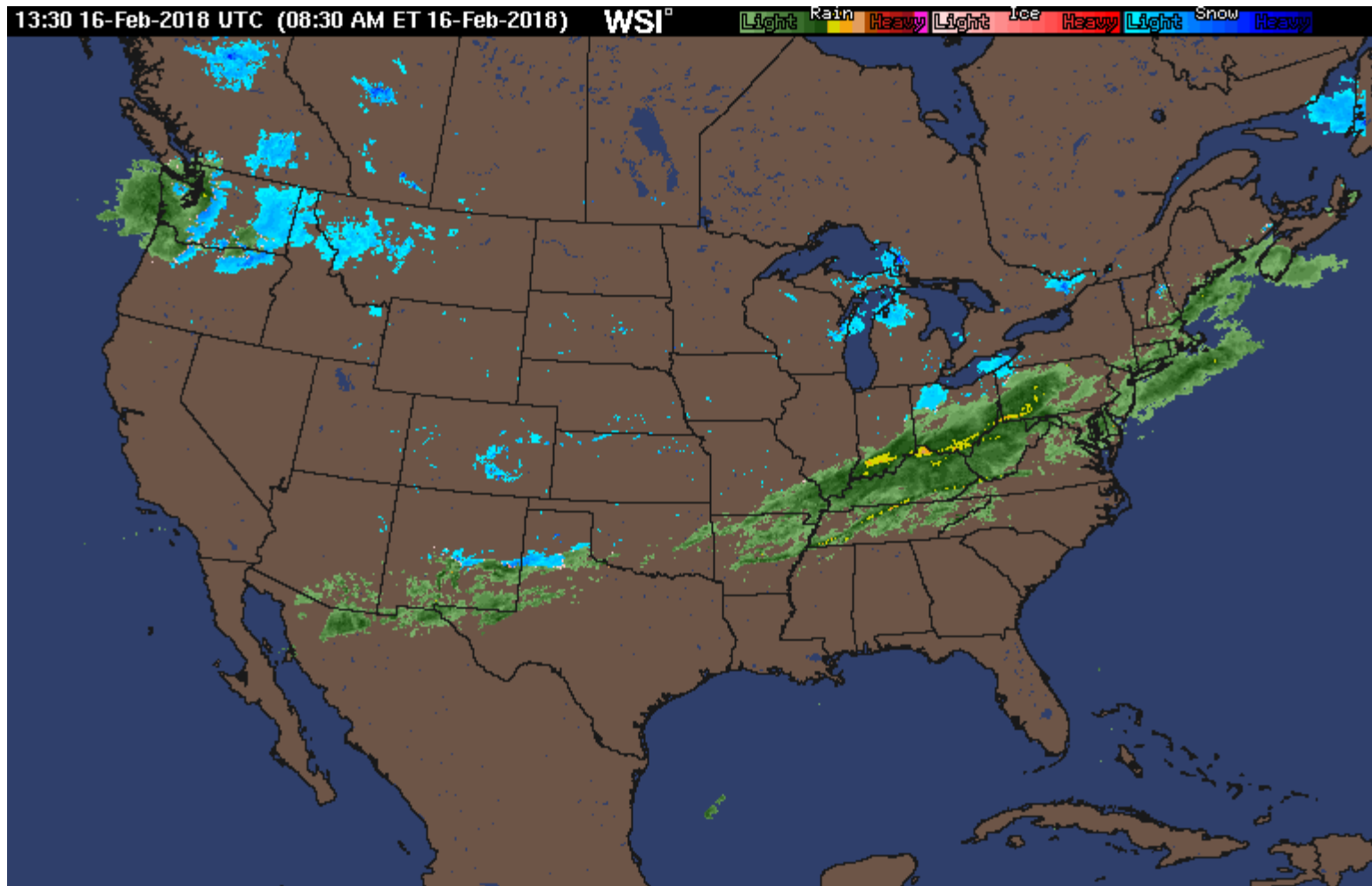
500 mb Height

Valid: 09z Fri 16 Feb 2018

ECMWF  
Hour: 9



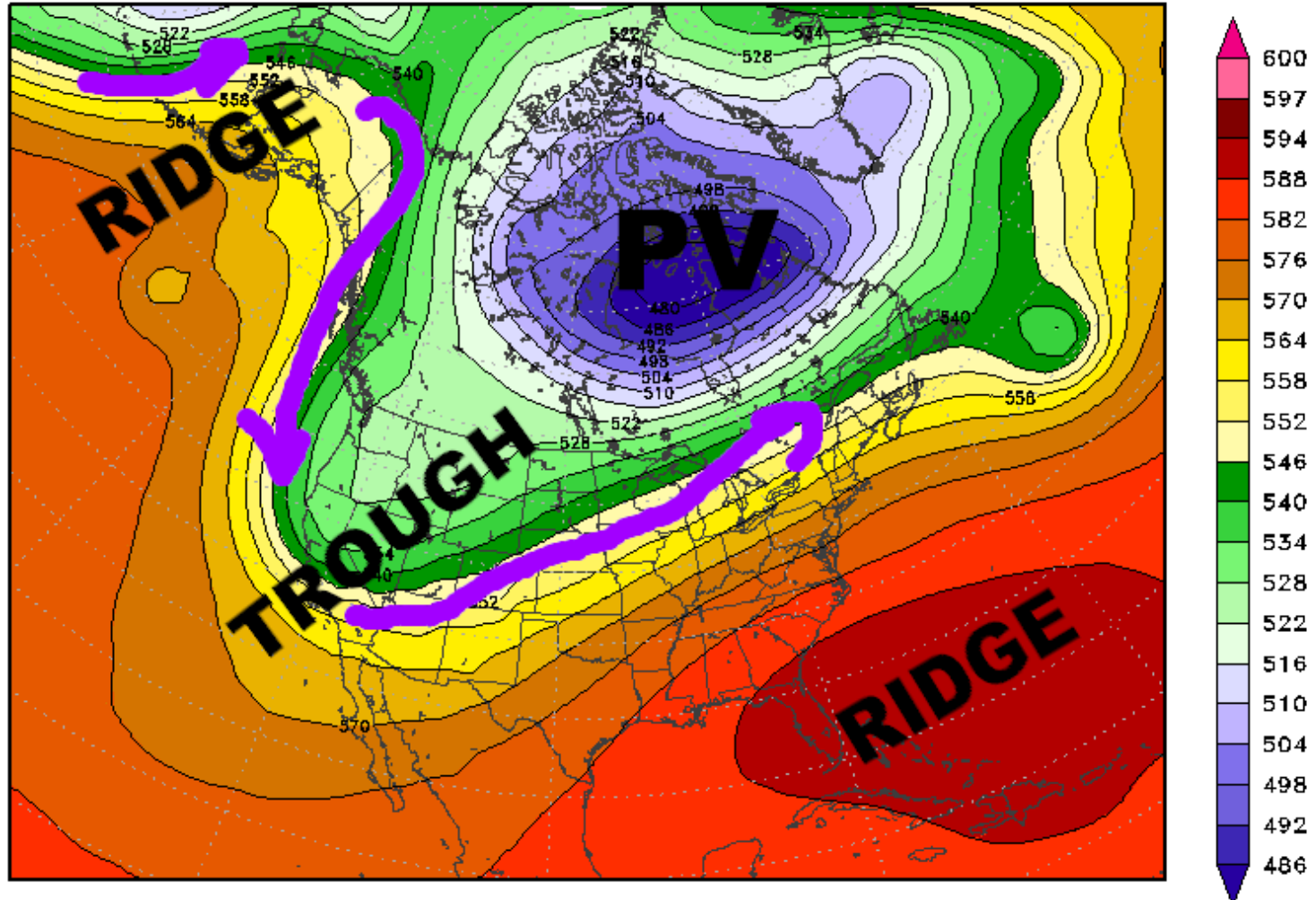
# FRI AM NATIONAL RADAR



# MAJOR TROUGH DEVELOPS OVER WEST US... SE RIDGE AMPLIFIES = WARM WET PATTERN FOR DELTA/ ECB

500 mb Height  
Valid: 12z Mon 19 Feb 2018

ECMWF  
Hour: 84

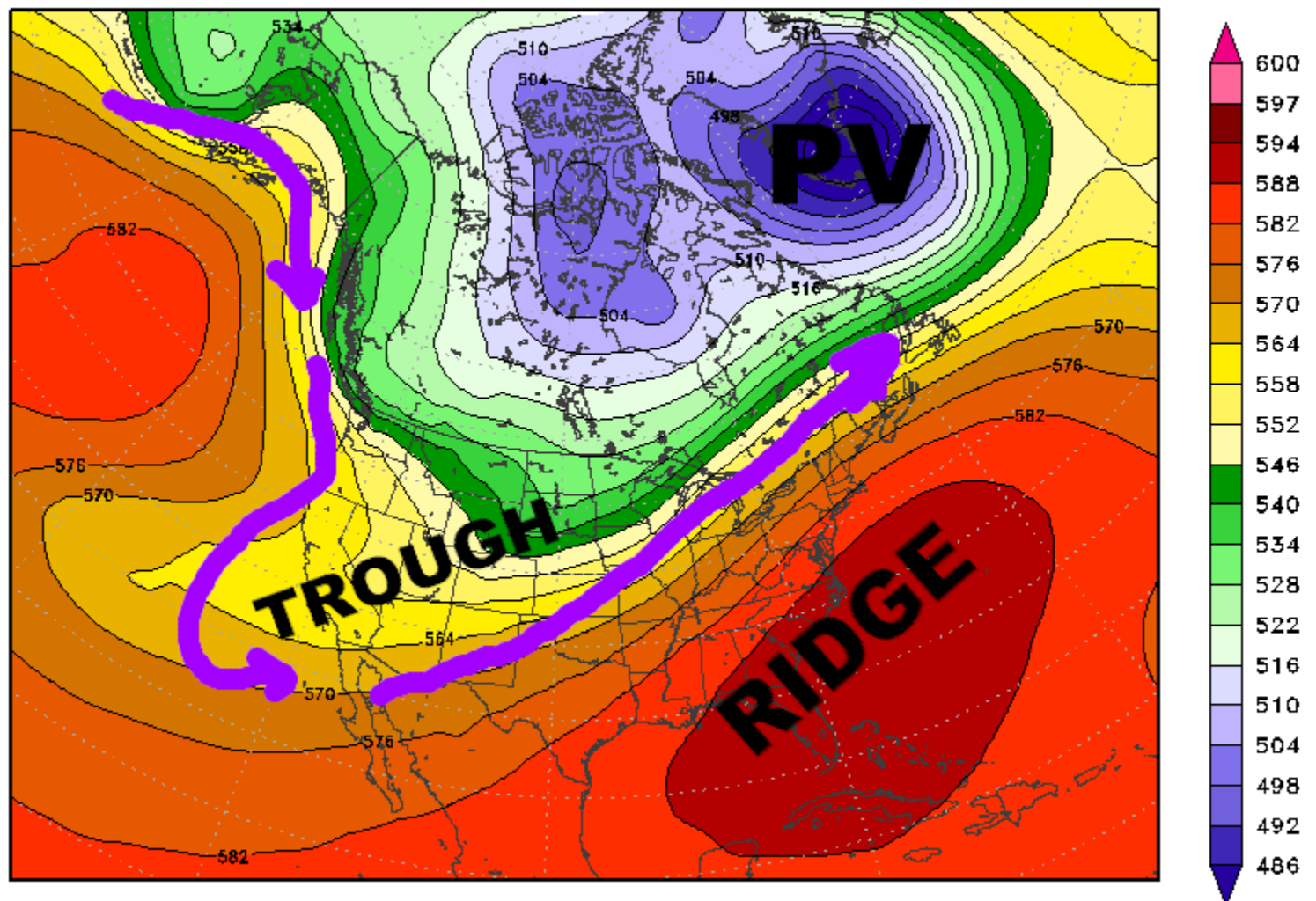




# NOT MUCH CHANGES BY FEB 22..

500 mb Height  
Valid: 00z Thu 22 Feb 2018

ECMWF  
Hour: 144

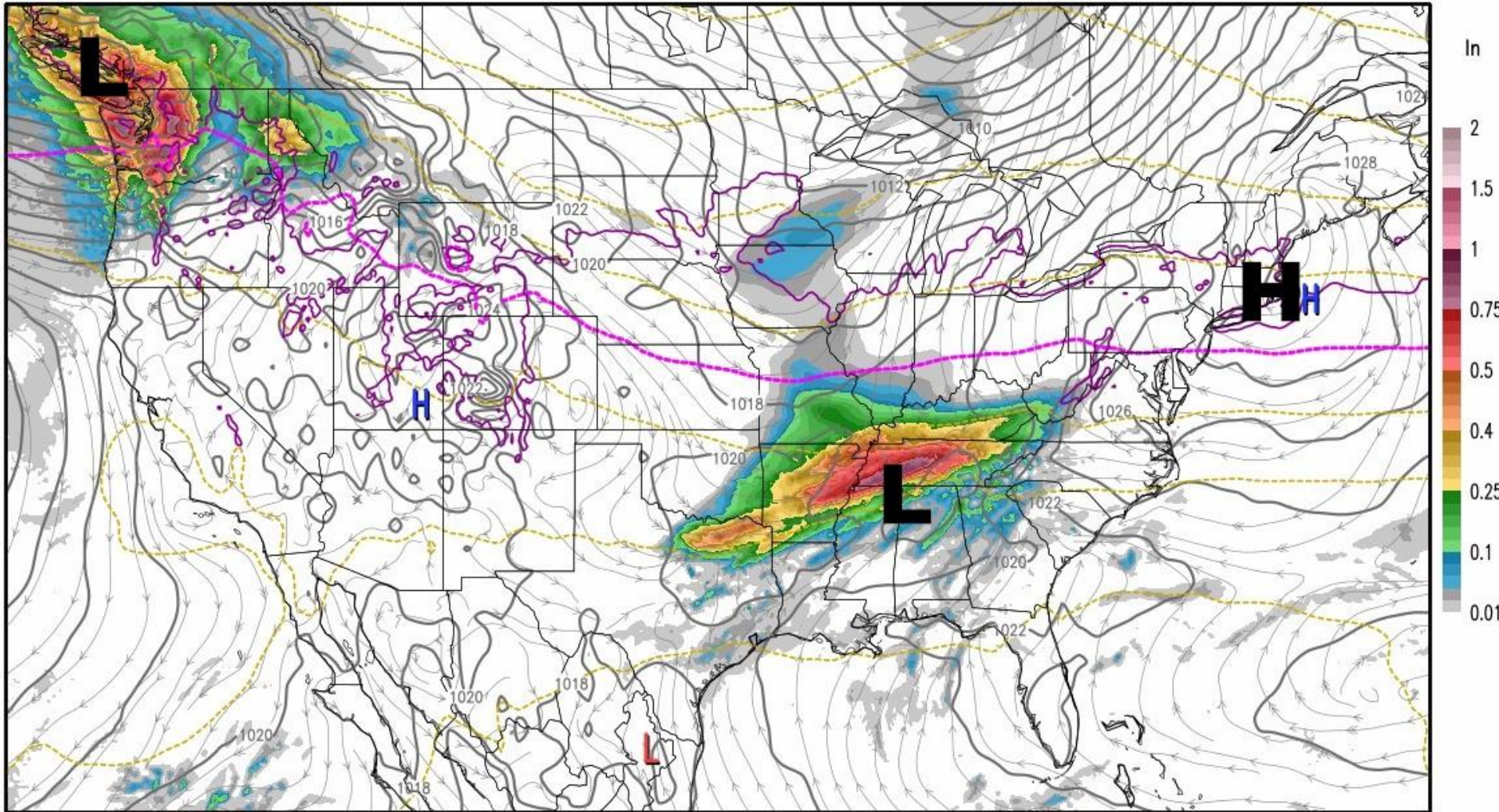


# SAT

MSLP, 6hr Precip, Wind, Thickness, 32f

Valid Saturday 18Z 02/17

EuroWX.com



ECMWF HRES MODEL RUN 00Z 02/16 42hr FORECAST

C 2018 ECMWF

This service is based on data and products of the European Center for Medium-range Weather Forecasts.

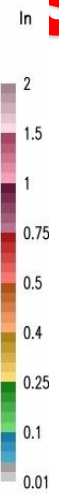
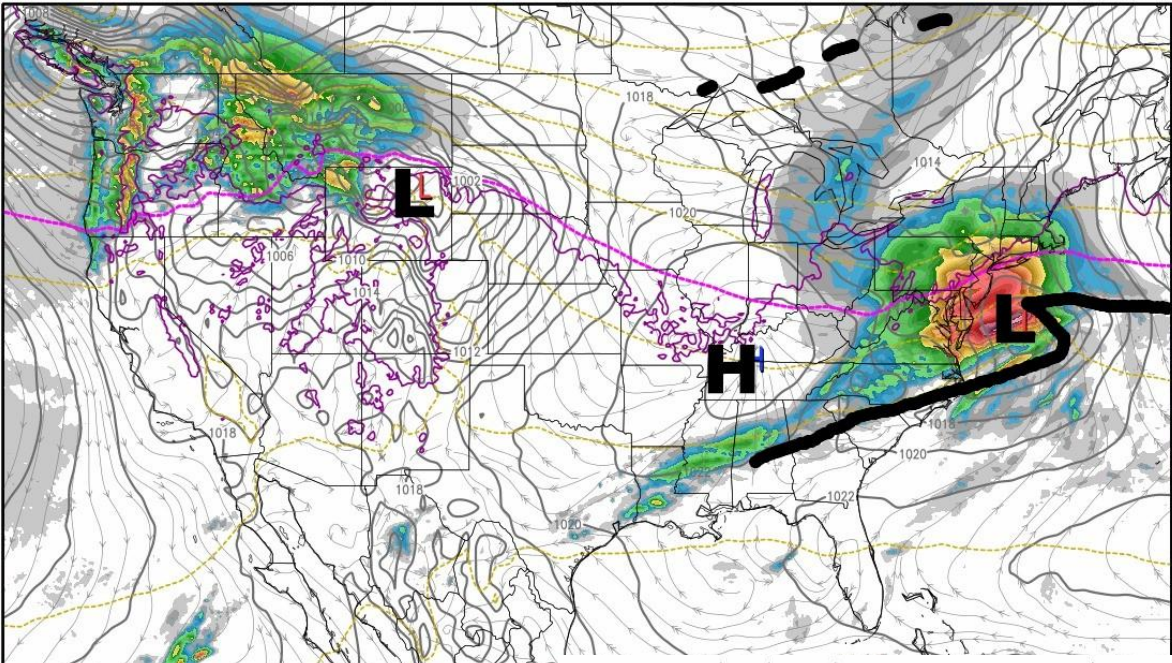


MSLP, 6hr Precip, Wind, Thickness, 32f

Valid Sunday 06Z 02/18

EuroWX.com

# SUN



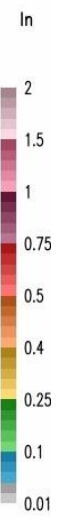
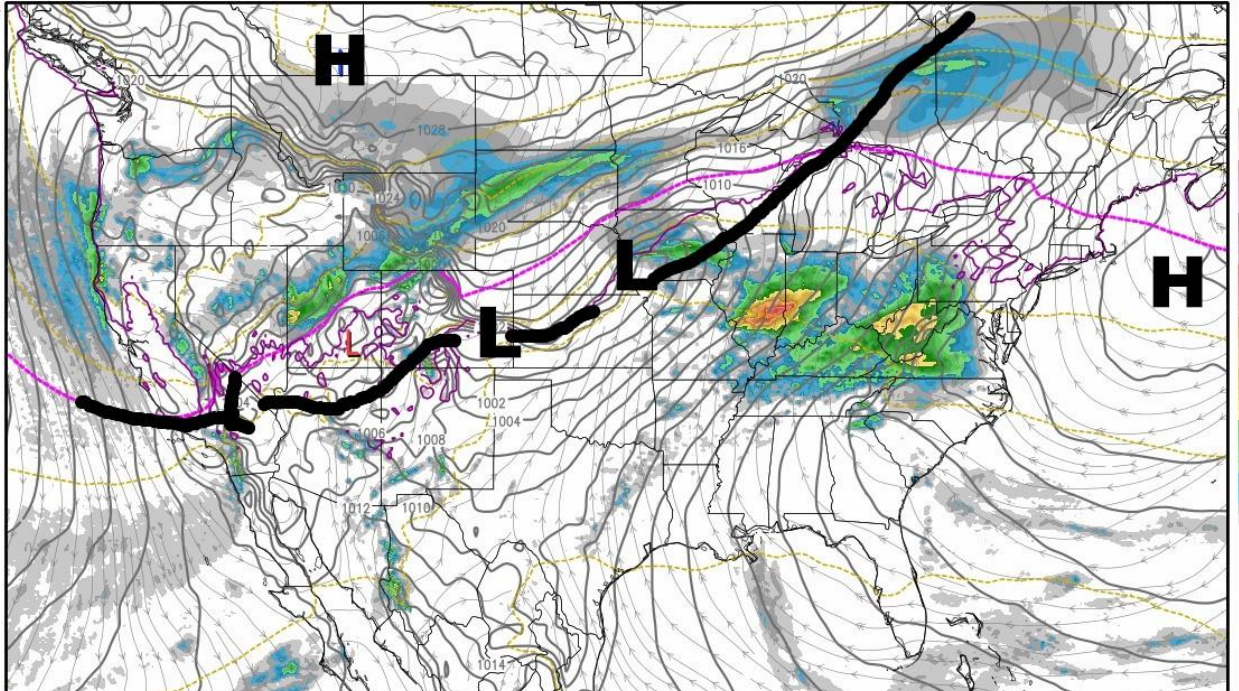
ECMWF HRES MODEL RUN 00Z 02/16 54hr FORECAST  
This service is based on data and products of the

MSLP, 6hr Precip, Wind, Thickness, 32f

Valid Monday 12Z 02/19

EuroWX.com

# MON

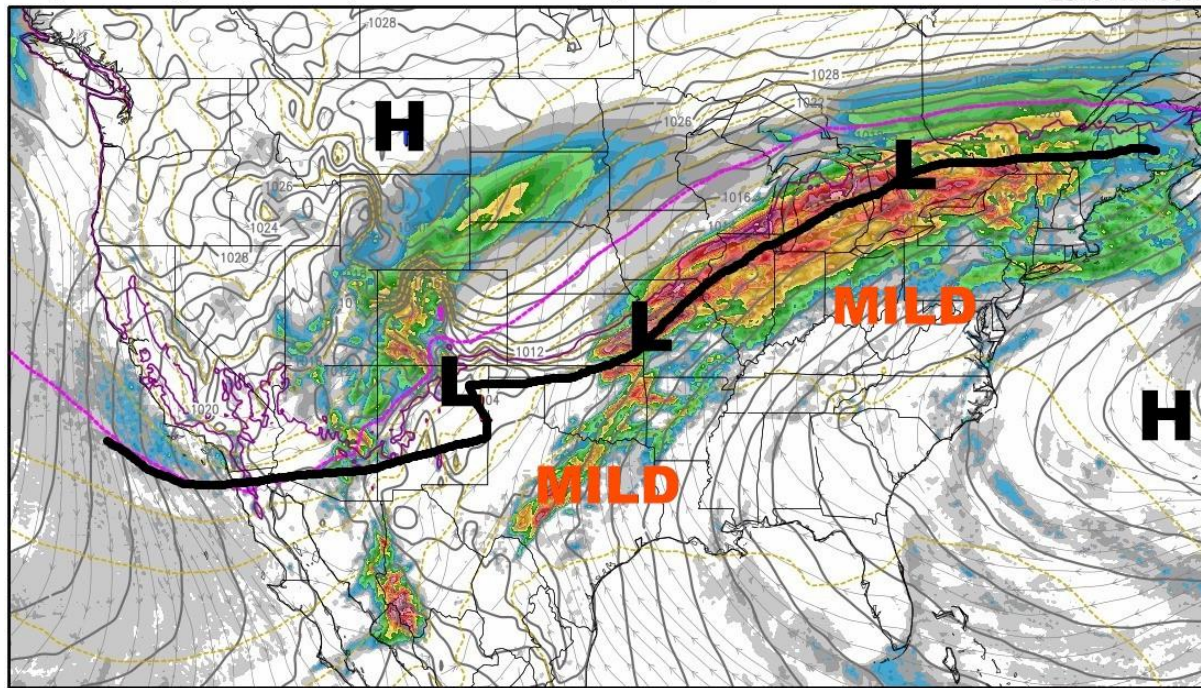




MSLP, 12hr Precip, Wind, Thickness, 32f

Valid Tuesday 12Z 02/20

EuroWX.com



ECMWF HRES MODEL RUN 00Z 02/16 108hr FORECAST

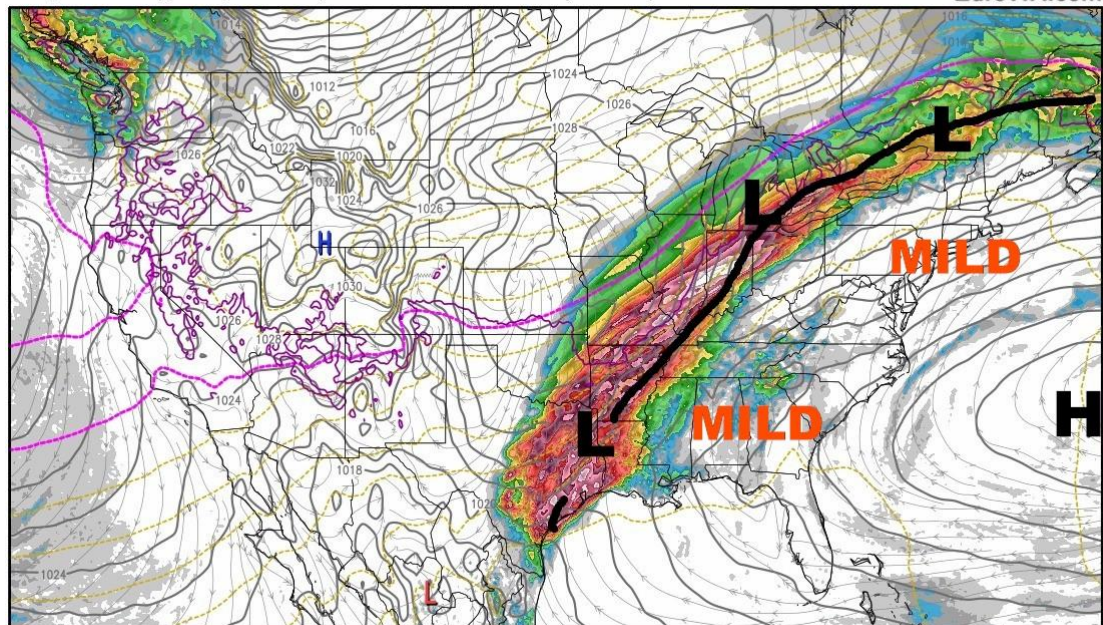
C 2018 ECMWF

This service is based on data and products of the European Centre for Medium-Range Weather Forecasts.

MSLP, 12hr Precip, Wind, Thickness, 32f

Valid Thursday 00Z 02/22

EuroWX.com



ECMWF HRES MODEL RUN 00Z 02/16 144hr FORECAST

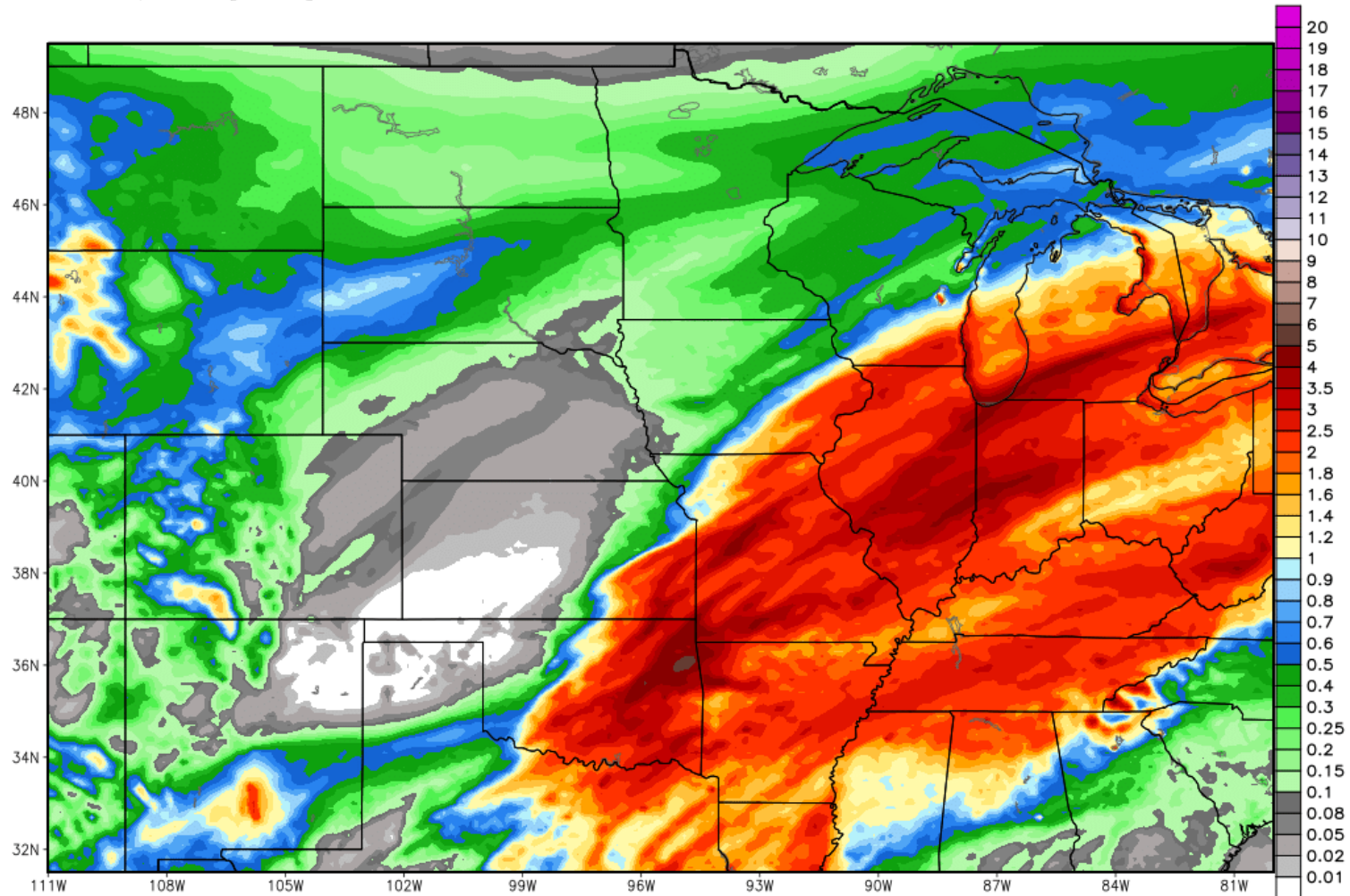
C 2018 ECMWF

This service is based on data and products of the European Center for Medium-range Weather Forecasts.



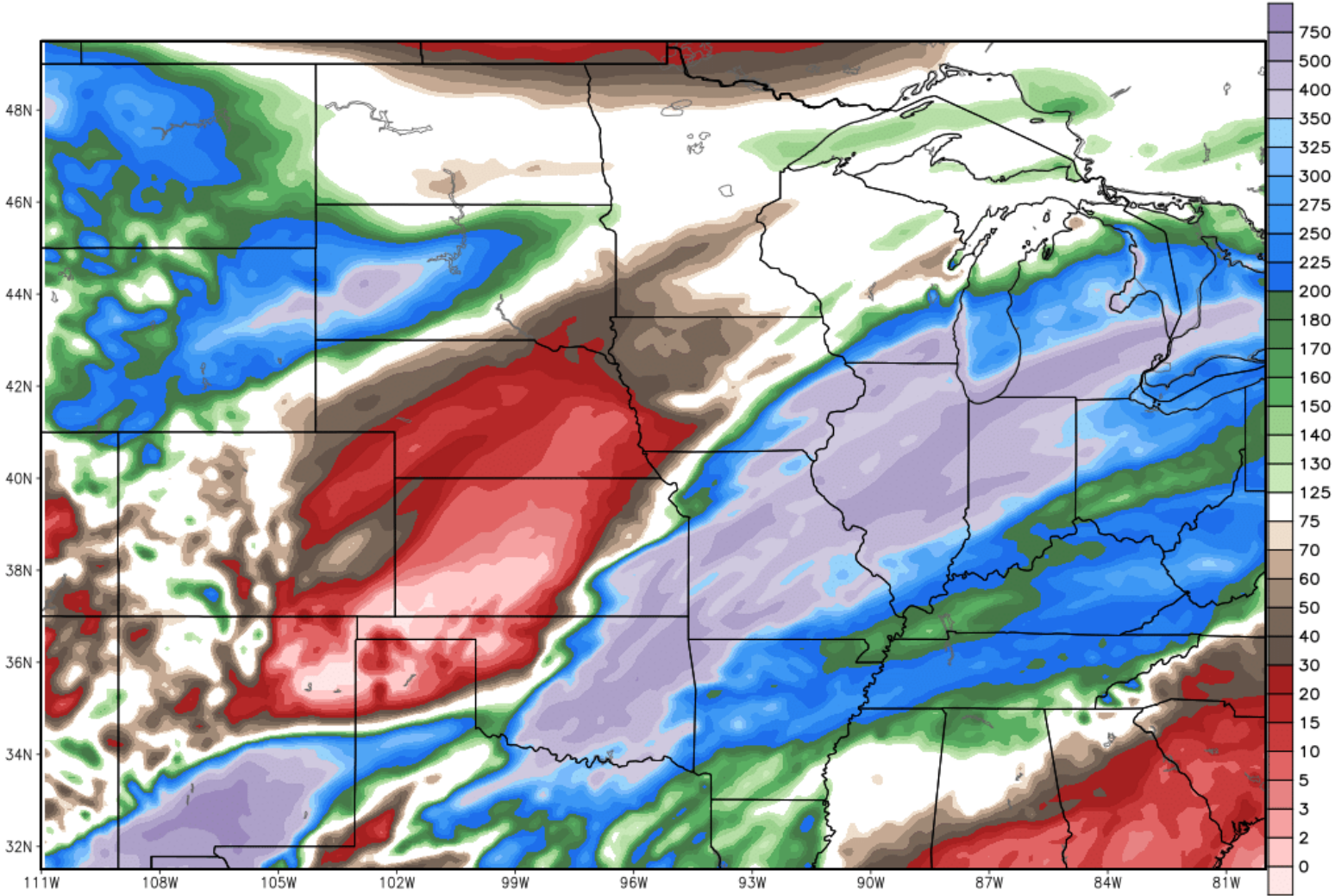
# TOTAL RAINFALL NEXT 7 DAYS-- 0.5-1.0"/ 12-38mm west/ central TX 1-4"/ 25-100mm over eastern OK NE MO far se IA ILL TN KY IND OH WVA 0.50-2.5/ 12-60mm MS AL LA east TX

ECMWF 7-day Precipitation [inch] INIT: 00Z16FEB2018 fx: [174] hr --> Fri 06Z23FEB2018  
Total Precipitation [inches] between 06Z16FEB2018 -- 06Z23FEB2018



# PRECIP ANOMALIES NEXT 7D-

ECMWF 7-day Precip Anomaly [% of normal] between 06Z16FEB2018 -- 06Z23FEB2018  
INIT: 00Z16FEB2018 fx: [174] hr --> Fri 06Z23FEB2018





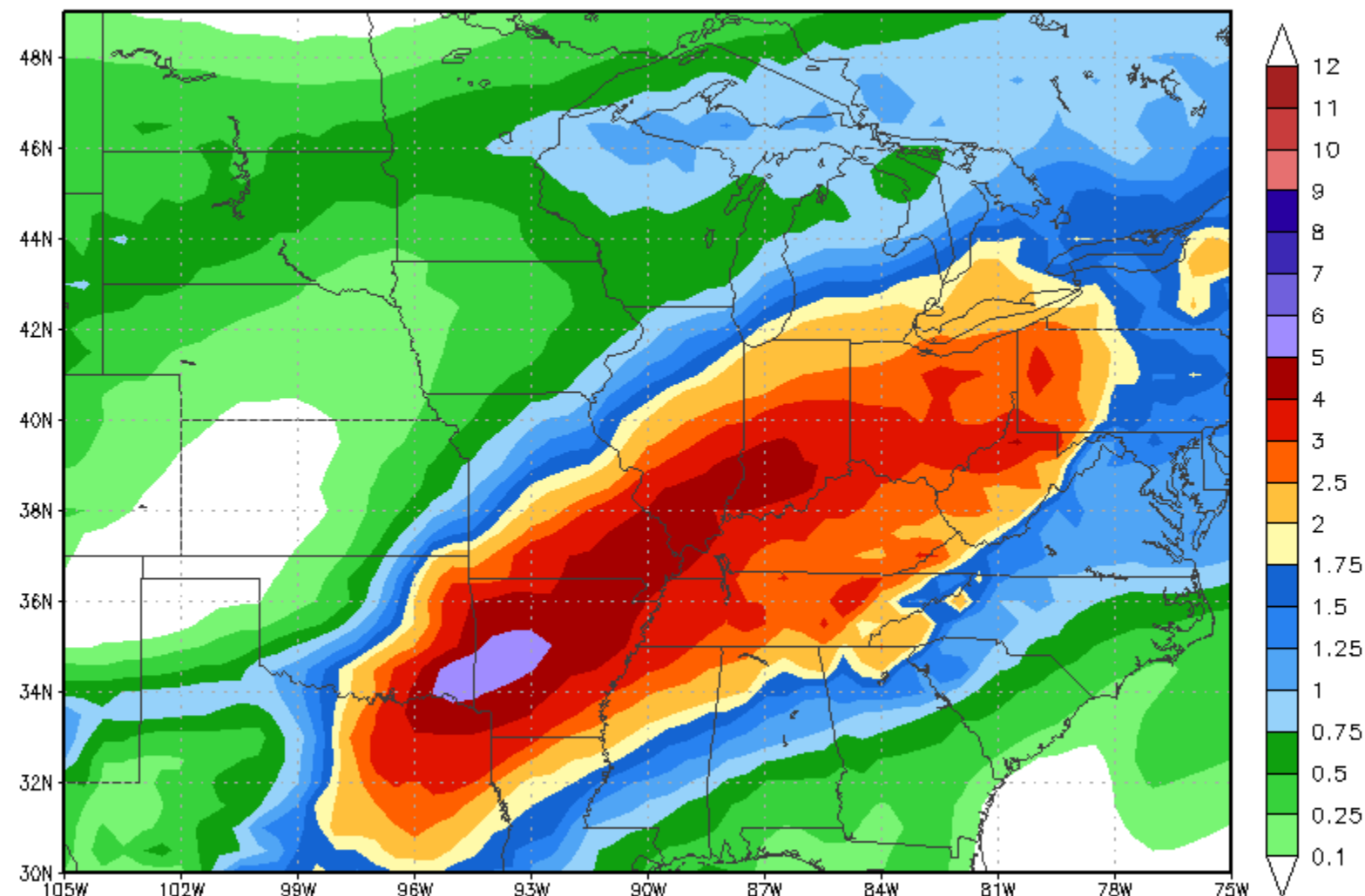
# TOTAL RAINFALL NEXT 7 DAYS – OPERATIONAL GFS.. CLOSE to EURO

174 Hour Total Precipitation (in)

Valid: 00z Fri 16 Feb 2018 – 06z Fri 23 Feb 2018

GFS-ENS-MAXRES

Hour: 0 – 174



Max: 5.9 in  
Min: 0.0 in

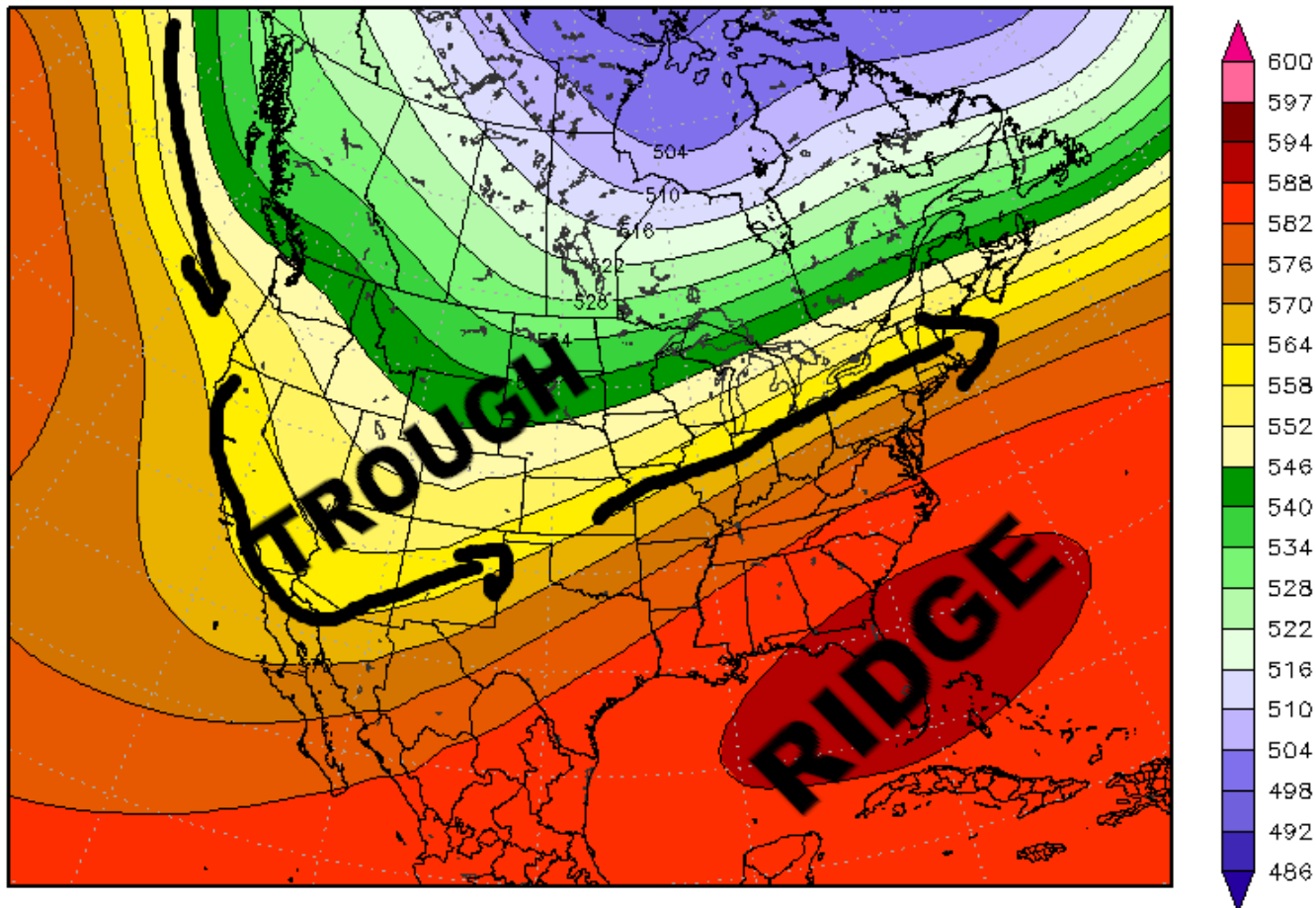
StormVistaWxModels.com

Init: 00z Fri 16 Feb 2018  
2018-02-16-05:07

# Jet stream map day 7.5 more warm and wet for Delta/ ECB/SE /and East coast. SOME rain for central OK/ TX

500 mb Height  
Valid: 12z Fri 23 Feb 2018

ECMWF-EPS  
Hour: 180

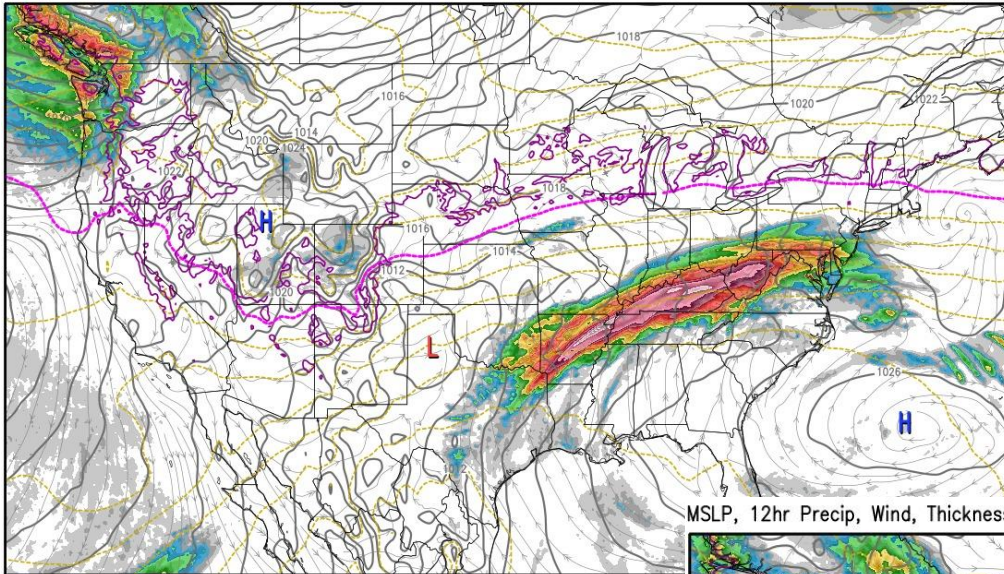


MSLP, 12hr Precip, Wind, Thickness, 32f

Valid Saturday 00Z 02/24

EuroWX.com

# FEB 24



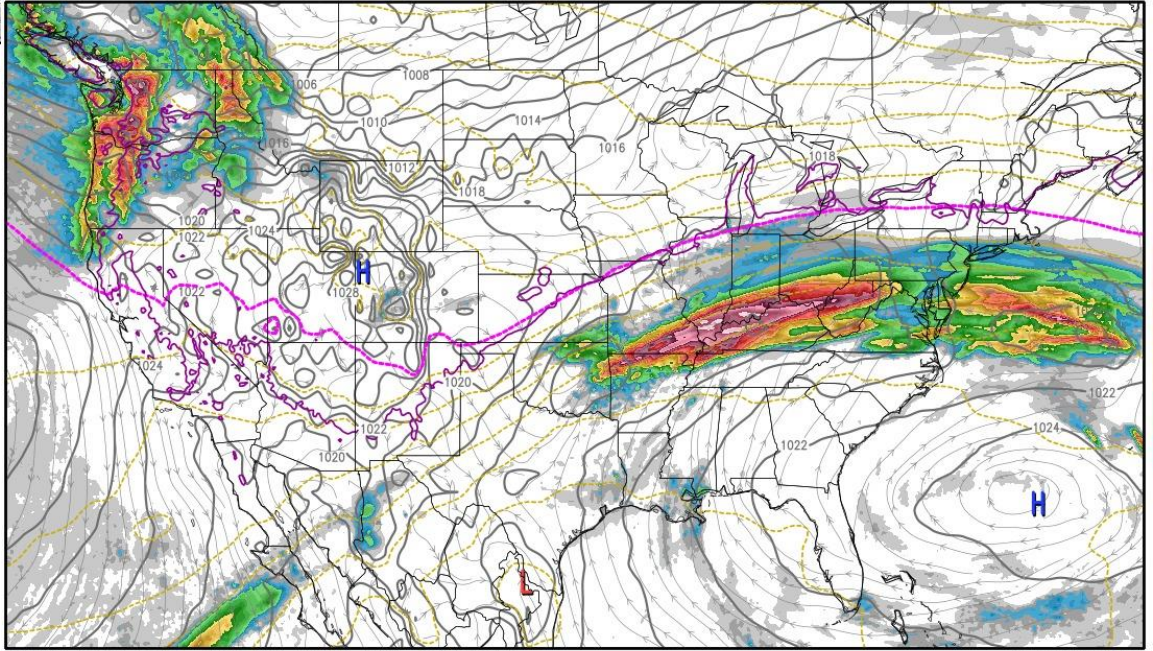
MSLP, 12hr Precip, Wind, Thickness, 32f

Valid Saturday 12Z 02/24

EuroWX.com

ECMWF HRES MODEL RUN 00Z 02/16 192hr FORECAST

This service is based on data and products of the European Center for



ECMWF HRES MODEL RUN 00Z 02/16 204hr FORECAST

This service is based on data and products of the European Center for Medium-range Weather Forecasts.

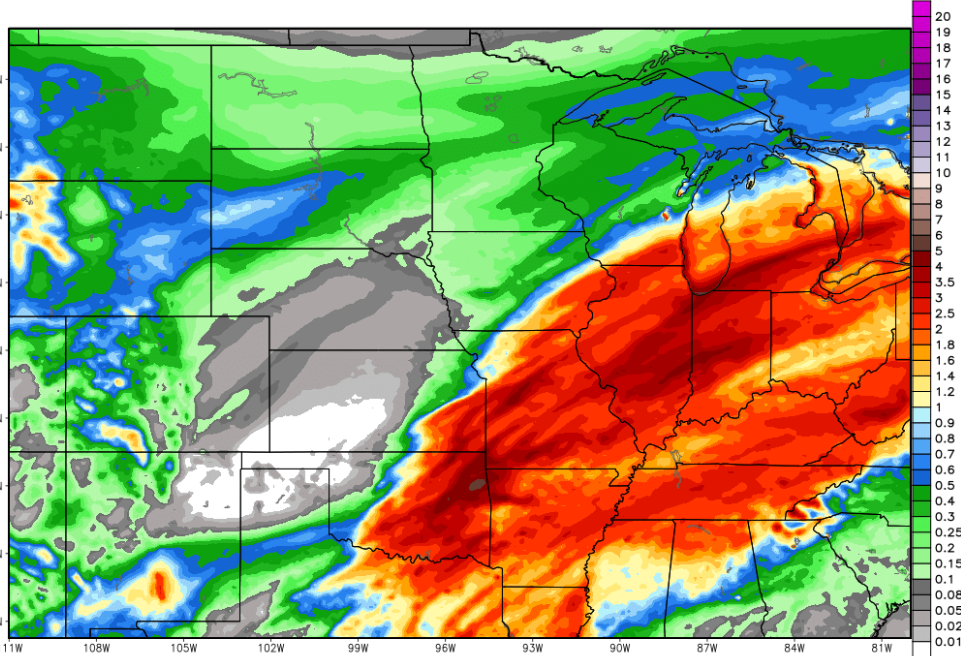
© 2018 ECMWF

# FEB 25

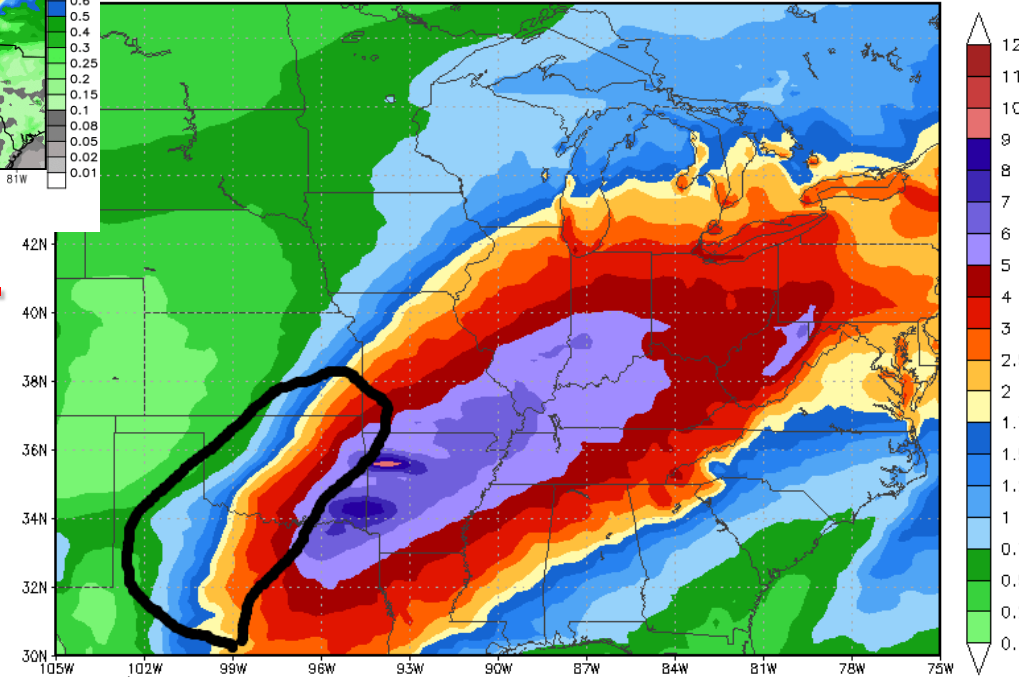
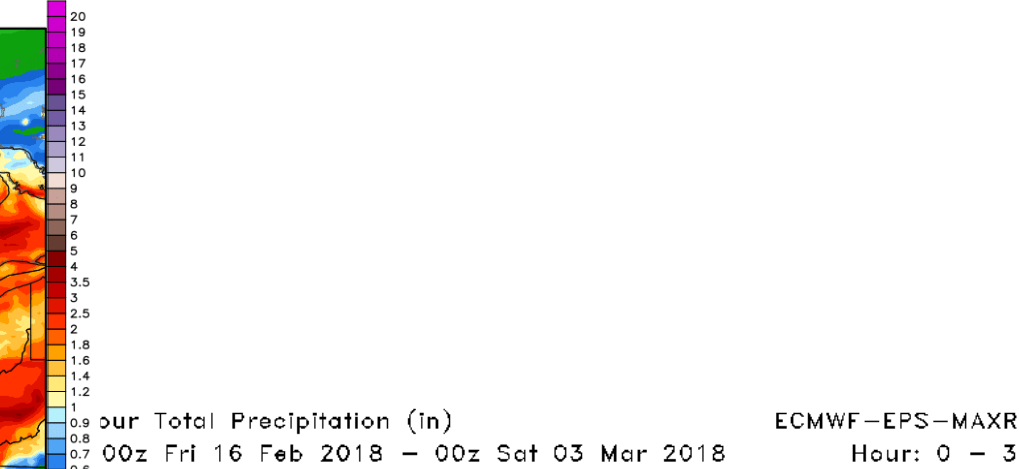


# COMAPRE WEEK 1 RAINS VS WEEK 1 AND WEEK 2 ECMWF

ECMWF 7-day Precipitation [inch] INIT: 00Z16FEB2018 fx: [174] hr --> Fri 06Z23FEB2018  
Total Precipitation [inches] between 06Z16FEB2018 -- 06Z23FEB2018

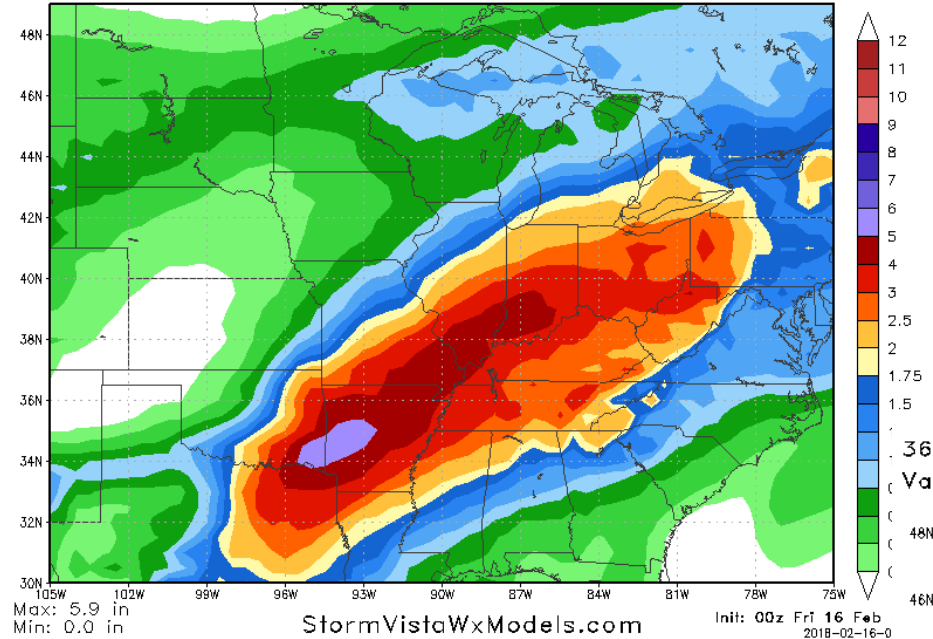


**some rains over central TX OK FOR WEEK 2 0.75-2.5"/20-60mm**



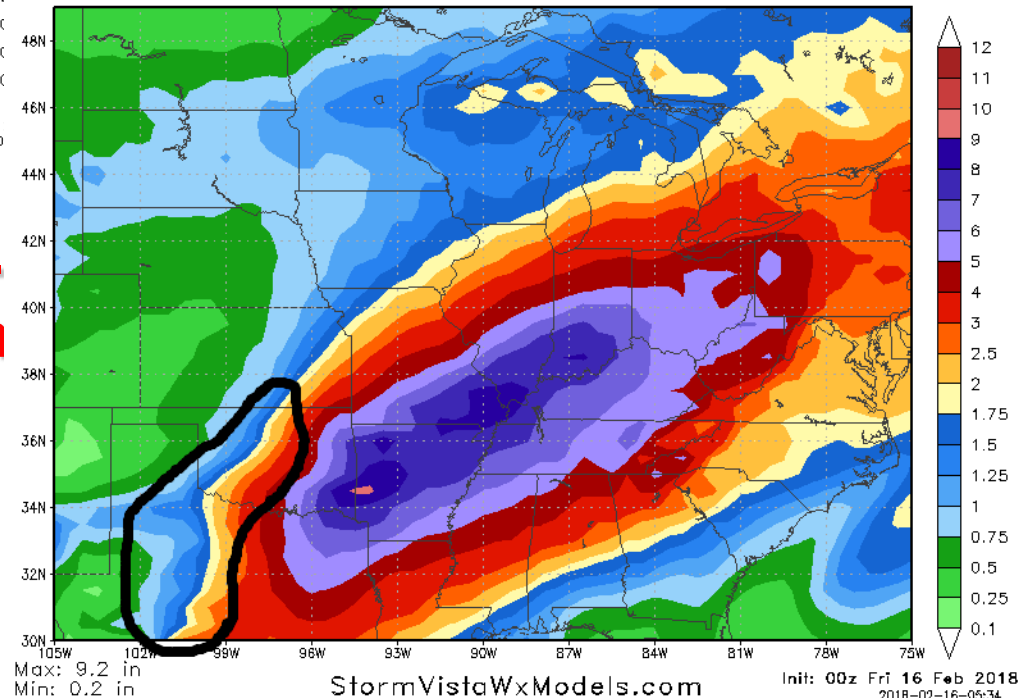
# COMAPRE WEEK 1 RAINS VS WEEK 1 AND WEEK 2 GFS

174 Hour Total Precipitation (in) GFS-ENS-MAXRES  
Valid: 00z Fri 16 Feb 2018 - 06z Fri 23 Feb 2018 Hour: 0 - 174



**some rains over central TX OK FOR WEEK 2 0.75-2.5"/20-60mm GOOD match with Euro**

366 Hour Total Precipitation (in) GFS-ENS-MAXRES  
Valid: 00z Fri 16 Feb 2018 - 06z Sat 03 Mar 2018 Hour: 0 - 366





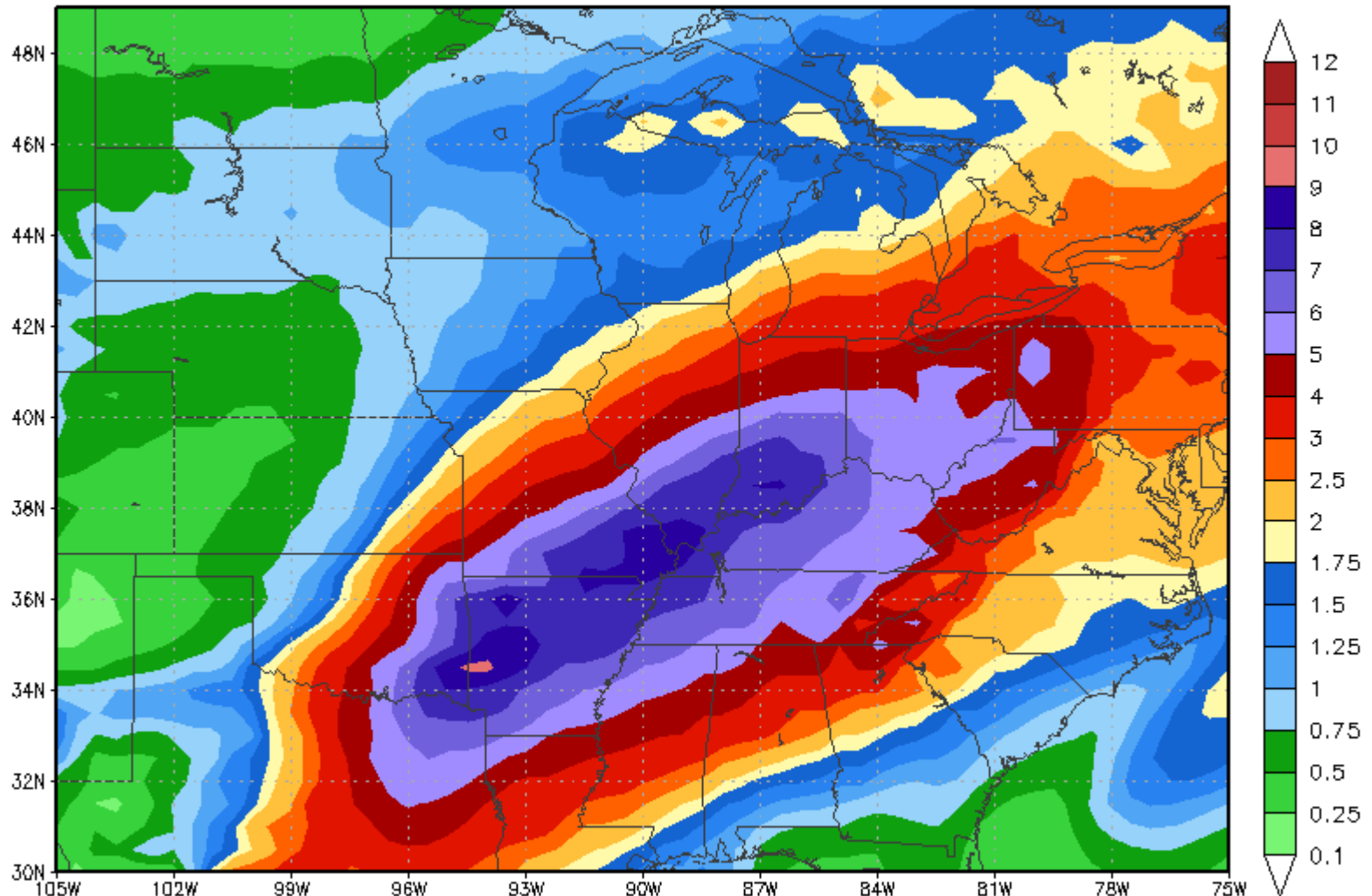
# TOTAL RAINFALL NEXT 14 DAYS – GFS ENSEMBLE

366 Hour Total Precipitation (in)

Valid: 00z Fri 16 Feb 2018 – 06z Sat 03 Mar 2018

GFS-ENS-MAXRES

Hour: 0 – 366



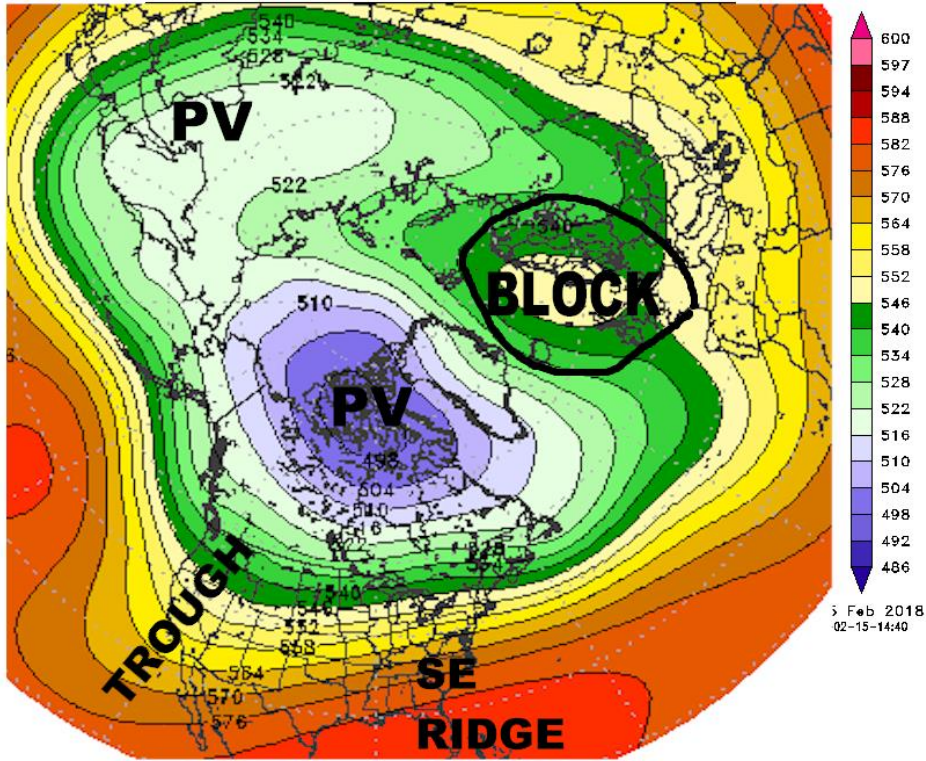
Max: 9.2 in  
Min: 0.2 in

StormVistaWxModels.com

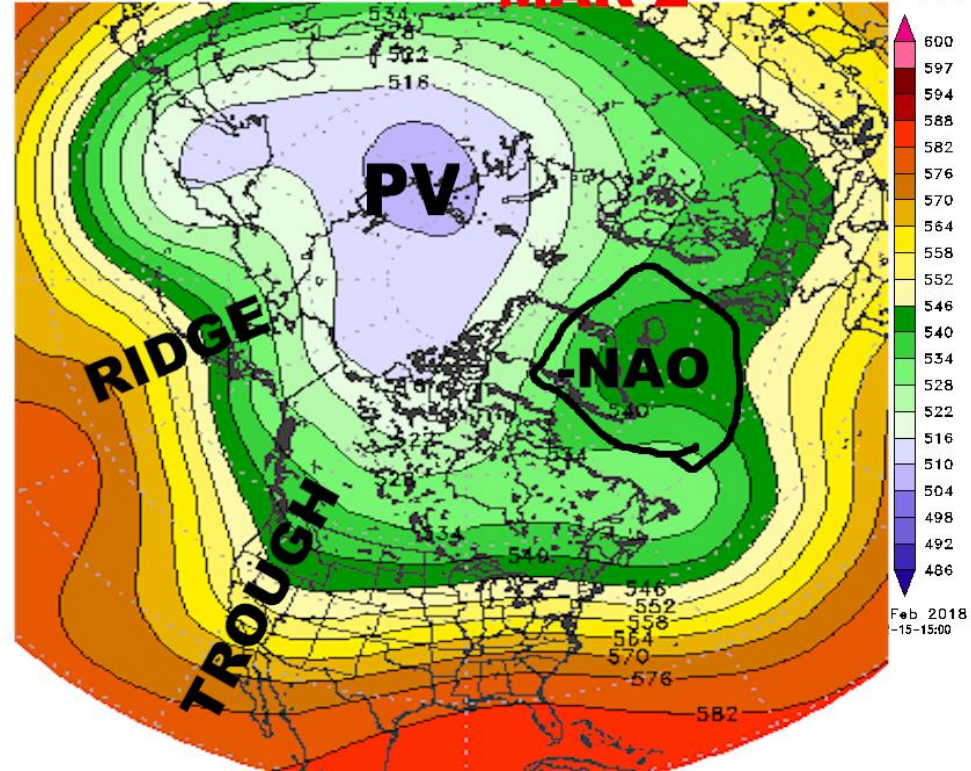
Init: 00z Fri 16 Feb 2018  
2018-02-16-05:34

# 11-15 DAY PATTERN – GREENLAND BLOCK... WEST COAST TROUGH ALTERS THE PATTERN

500 mb Height  
Valid: 12z Sun 25 Feb 2018 **FEB 25** ECMWF-EPS  
Hour: 240



500 mb Height  
Valid: 12z Fri 02 Mar 2018 **MAR 2** ECMWF-EPS  
Hour: 360



**The Greenland Block (-NAO) feature knocks down Southeast US Ridge. This in turn allows for West coast energy to track more West to East which means more rain chances for central/ Lower Plains**

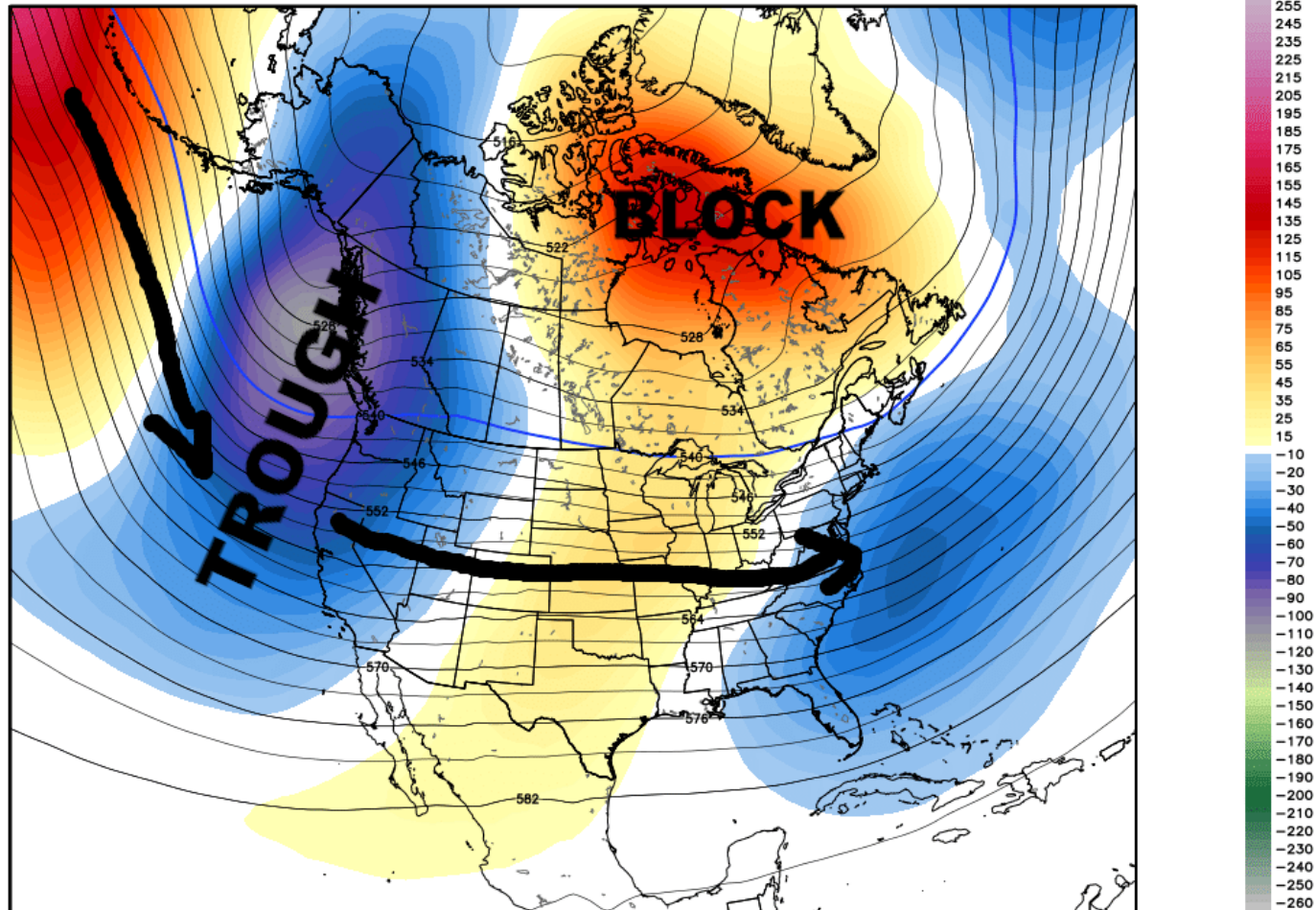


# Deep West coast trough and No se ridge means wetter pattern for Plains and WCB How WET is the issue? At least near Normal rainfall could be above Normal in parts of HRWWW

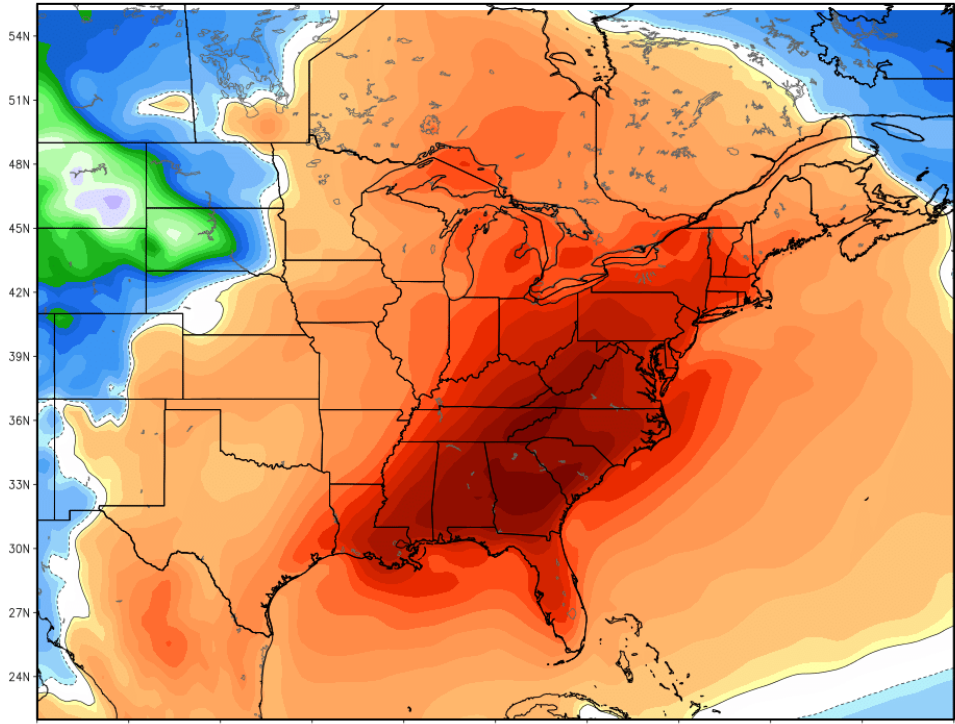
ECMWF EPS Monthly Ensemble Mean 500 hPa Geopotential Height [dm] & Anomaly [m]

INIT: 00Z15FEB2018 fx: [552] hr --> Sat 00Z10MAR2018

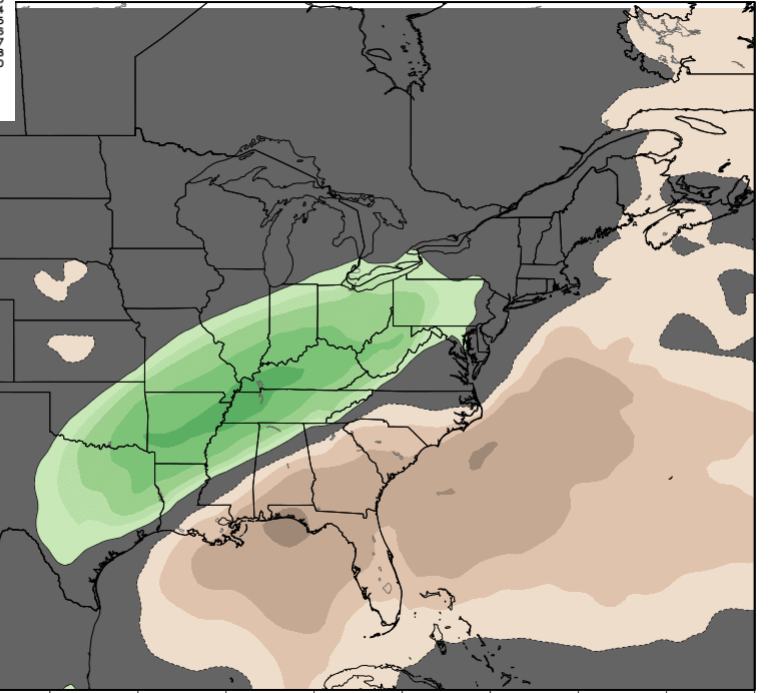
Min|Max: -112.9 | 190.3 m



ECMWF EPS Ensemble Mean 7-day Avg 2m Temperature Anomaly [°C] Min|Max: -8.5° | 7.2°C  
 Init: 00Z15FEB2018 -- [336] hr --> Valid on Thu 00Z01MAR2018 Day 7 - Day 14



Average between 00Z22FEB2018-00Z01MAR2018 | ECMWF EPS 1997-2016 Hindcast Climatology



Accumulation between 00Z22FEB2018-00Z01MAR2018 | ECMWF EPS 1997-2016 Hindcast Climatology

**GREEN area=**  
**Above Normal**  
**rains-- east TX east**  
**OK DELTA MO**  
**ECB**



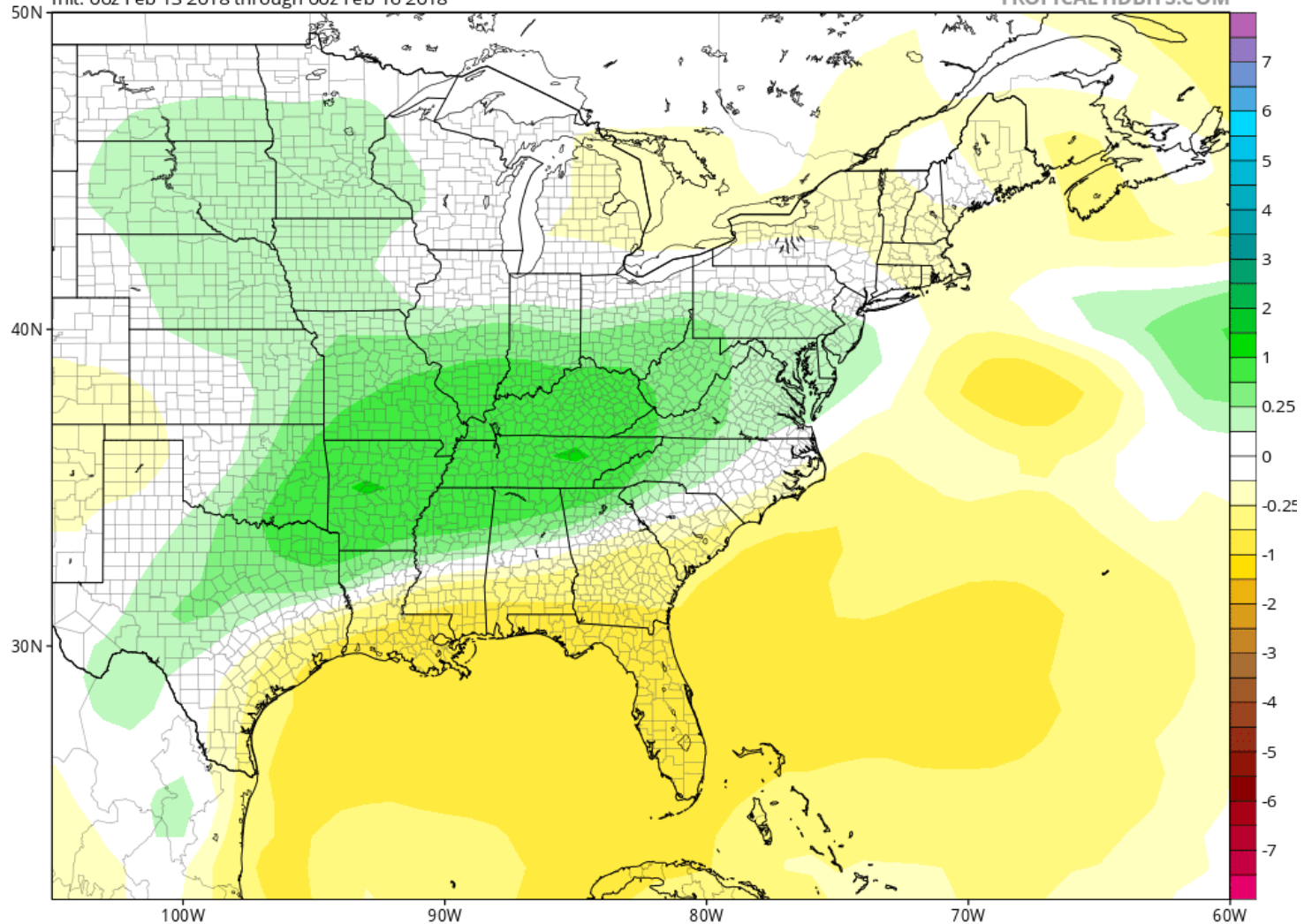
# CFS WEEK 2 WET over lower ECB TN VALLEY UPPER DELTA somewhat wetter than normal over WCB eastern TX

CFSv2 Accumulated Precip. Anomaly (in) from 00z23Feb2018 to 00z02Mar2018 (Days 8-14)

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

Init: 06z Feb 13 2018 through 00z Feb 16 2018

TROPICALTIDBITS.COM

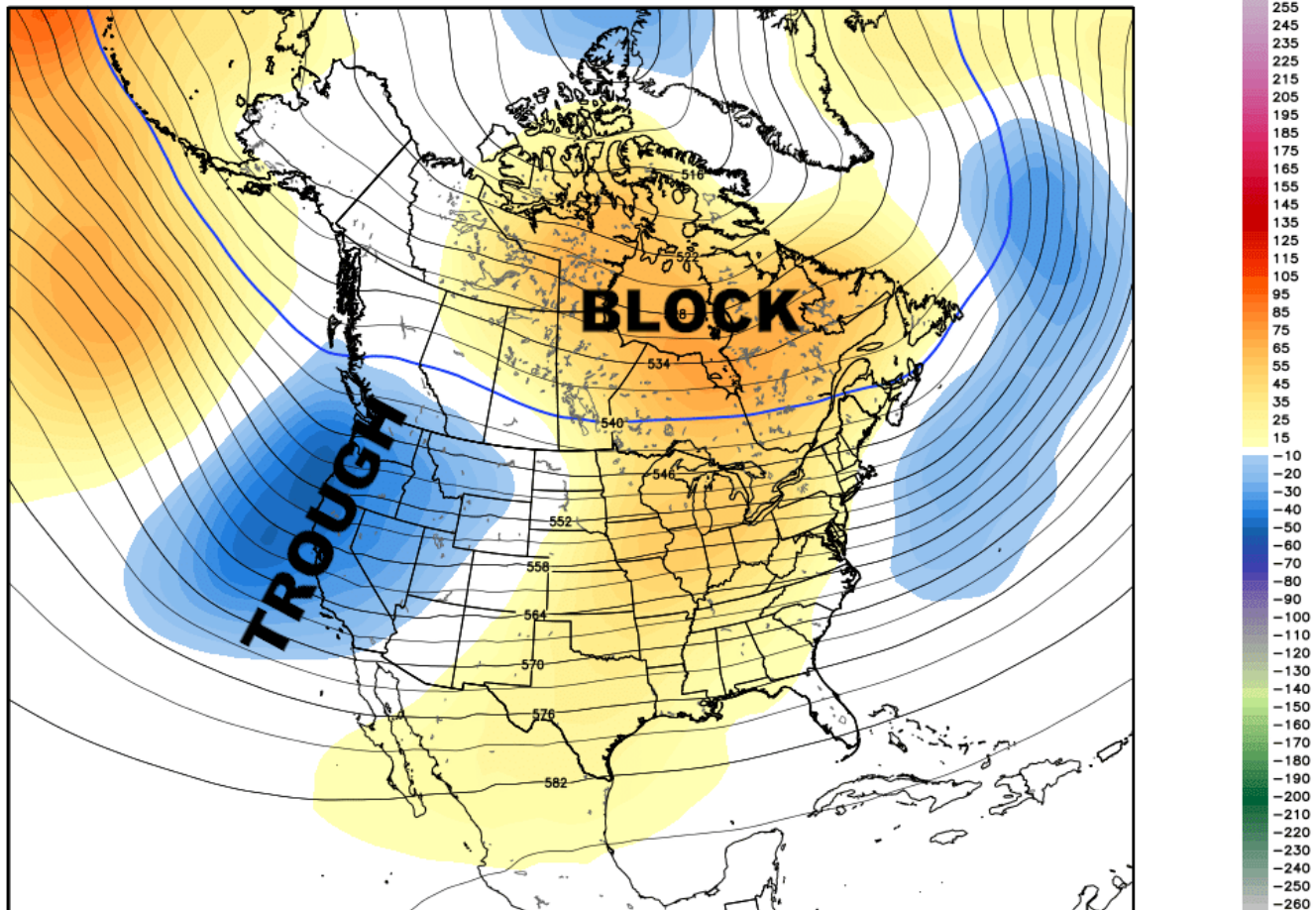


# MID MARCH 500mb (Jet stream Map) no change Major trough over West coast ... Lead to increase rain chances over HRWW

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

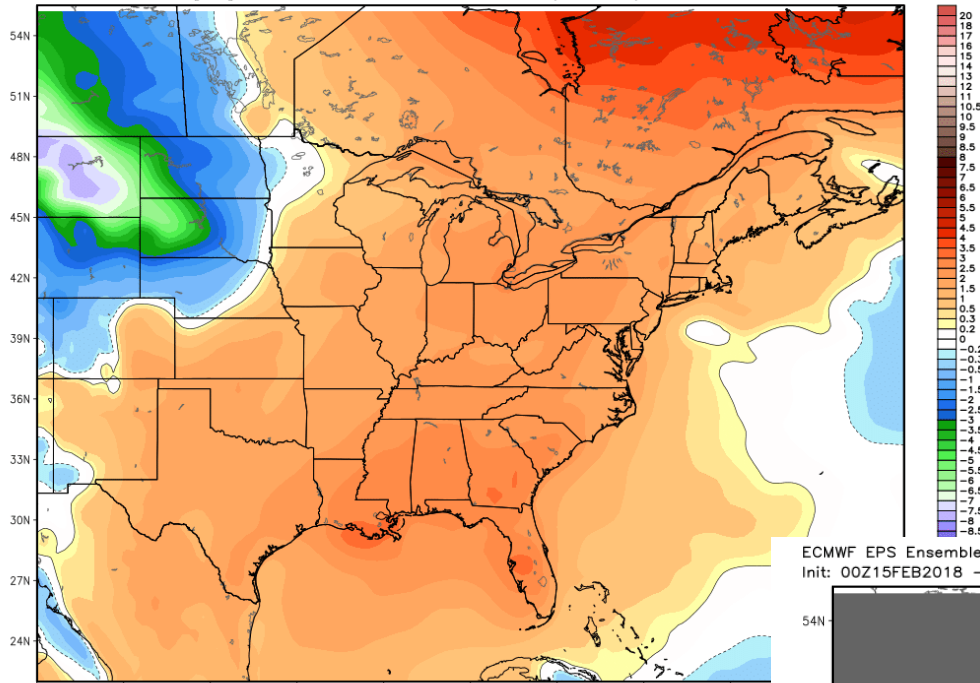
INIT: 00Z15FEB2018 fx: [768] hr --> Mon 00Z19MAR2018

Min|Max: -52.3 | 95.5 m





ECMWF EPS Ensemble Mean 7-day Avg 2m Temperature Anomaly [°C] Min|Max: -8.2° | 4.7°C  
Init: 00Z15FEB2018 -- [504] hr --> Valid on Thu 00Z08MAR2018 Day 14 - Day 21



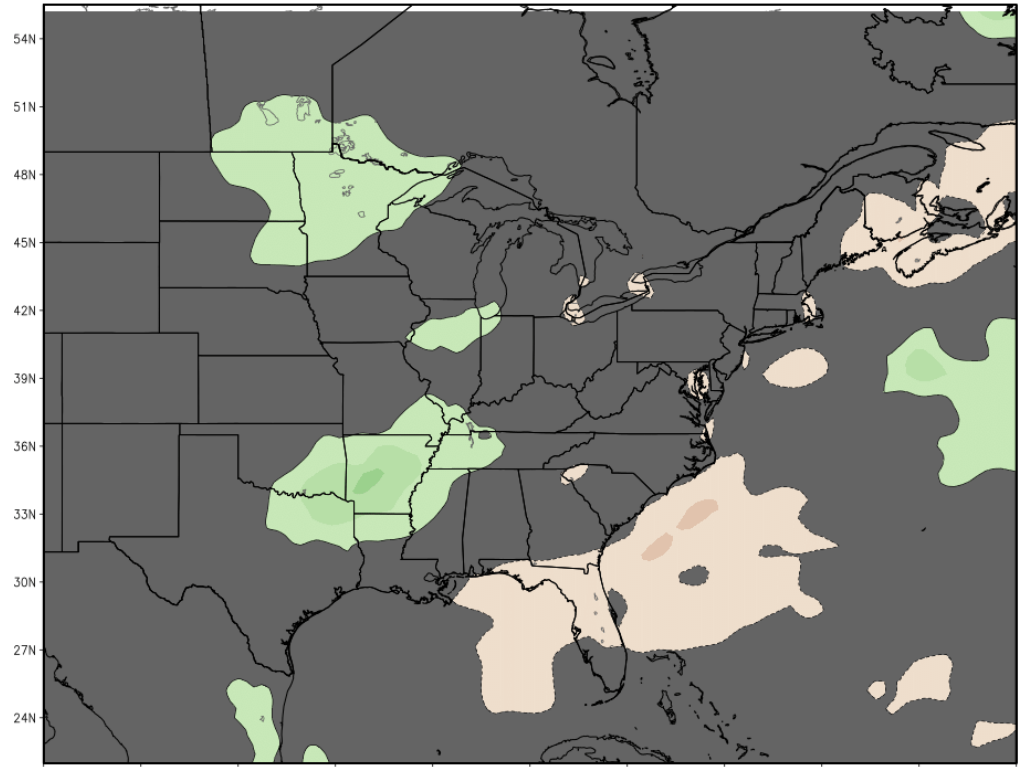
**MILD TEMPS  
MIDWEST DEEP  
SOUTH EAST  
COAST**

ECMWF EPS Ensemble Mean 7-day Avg Precipitation Anomaly [inch]  
Init: 00Z15FEB2018 -- [504] hr --> Valid on Thu 00Z08MAR2018 Day 14 - Day 21

Min|Max Anom: -1.1 | 0.8 inch

Average between 00Z01MAR2018-00Z08MAR2018 | ECMWF EPS 1997-2016 Hindcast Climatology

**GREEN area=  
Above Normal  
rains-- Delta MN  
ND SD ILL**



Accumulation between 00Z01MAR2018-00Z08MAR2018 | ECMWF EPS 1997-2016 Hindcast Climatology

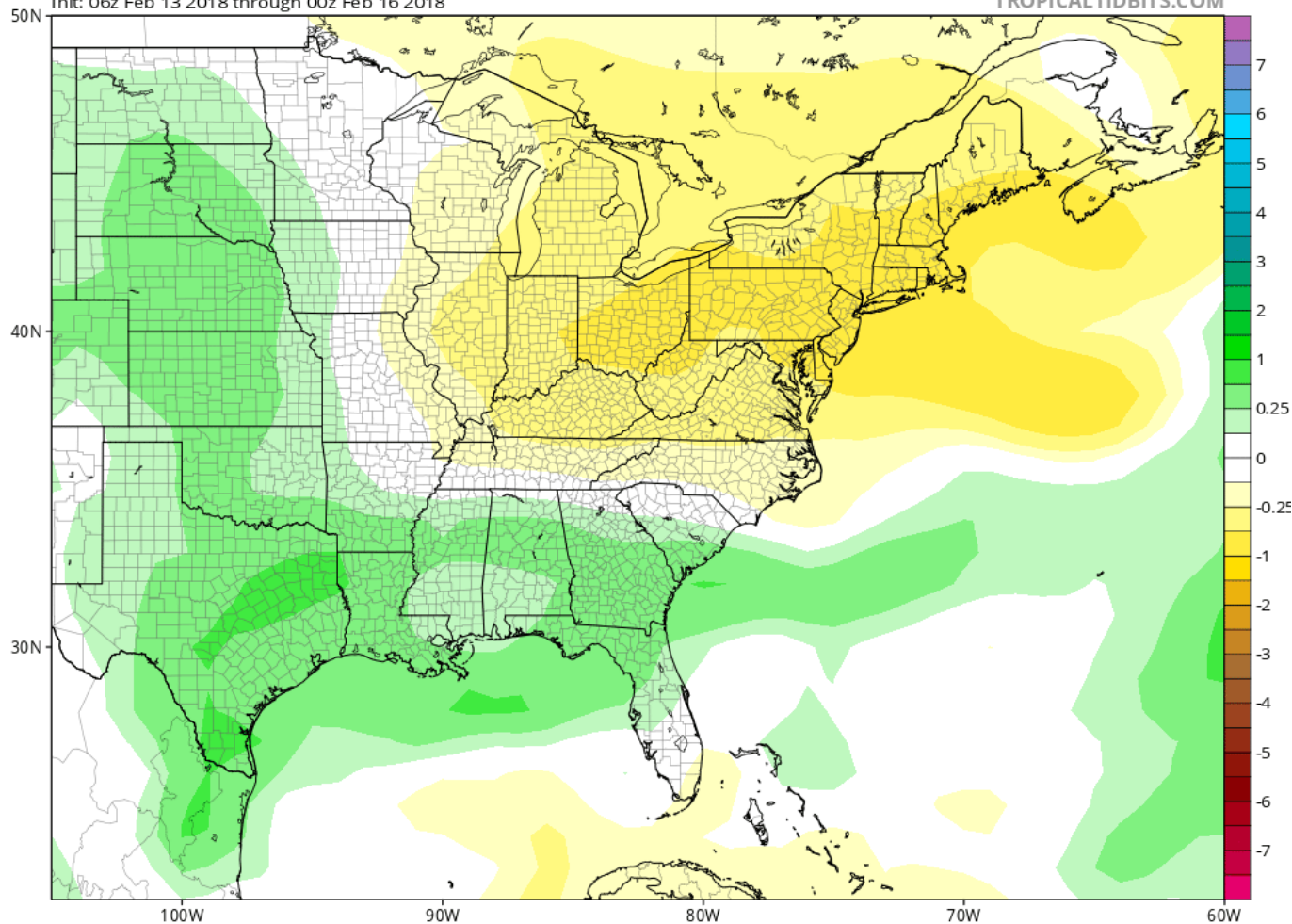
**CFS in week 3 is MUCH WETTER than Euro week 3 and wetter than Normal over all of HRWW areas. ECB turns drier**

CFSv2 Accumulated Precip. Anomaly (in) from 00z02Mar2018 to 00z09Mar2018 (Days 15-21)

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

Init: 06z Feb 13 2018 through 00z Feb 16 2018

TROPICALTIDBITS.COM





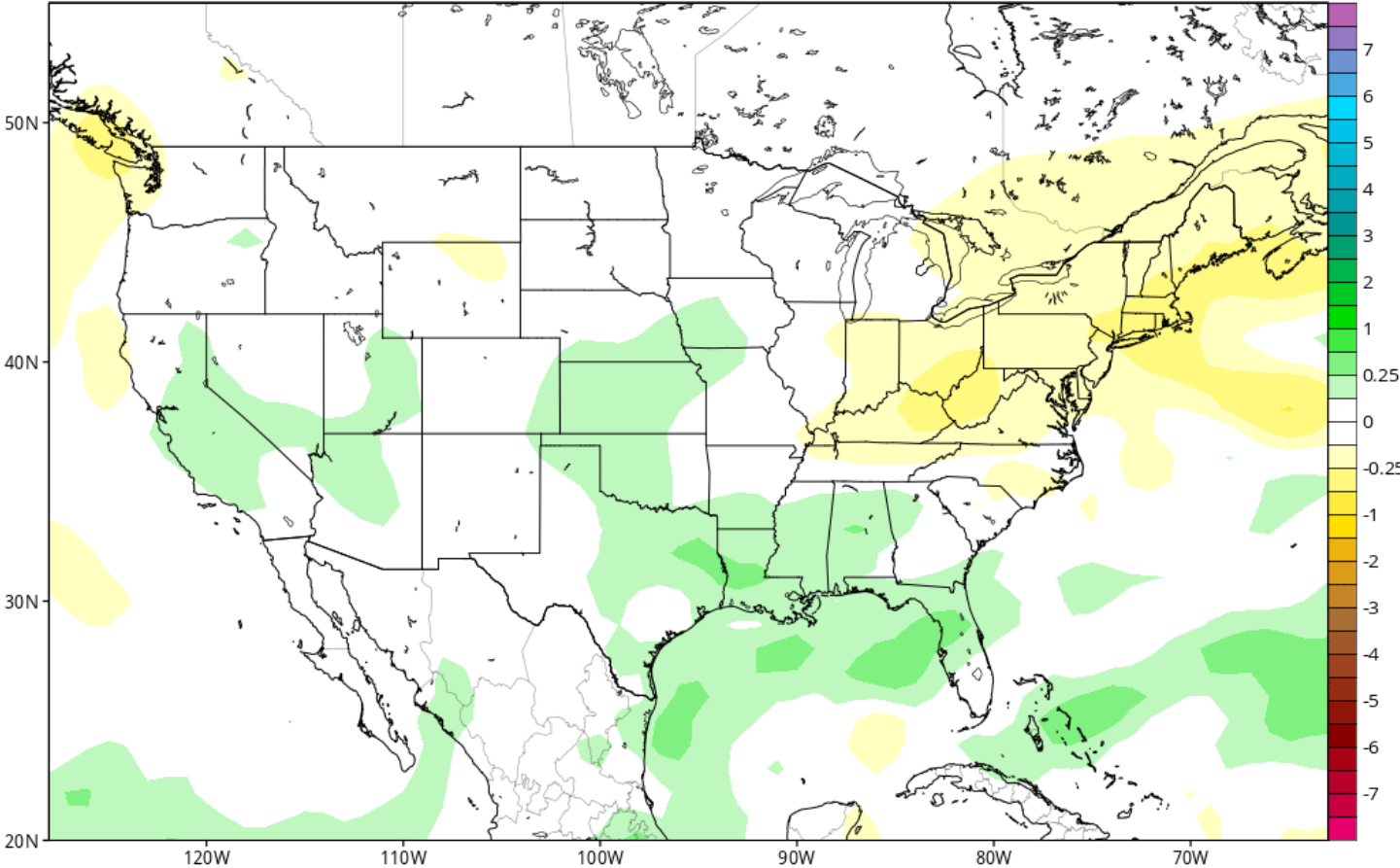
# CFS WEEK 4 HRWW still wet

CFSv2 Accumulated Precip. Anomaly (in) from 00z09Mar2018 to 00z16Mar2018 (Days 22-28)

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

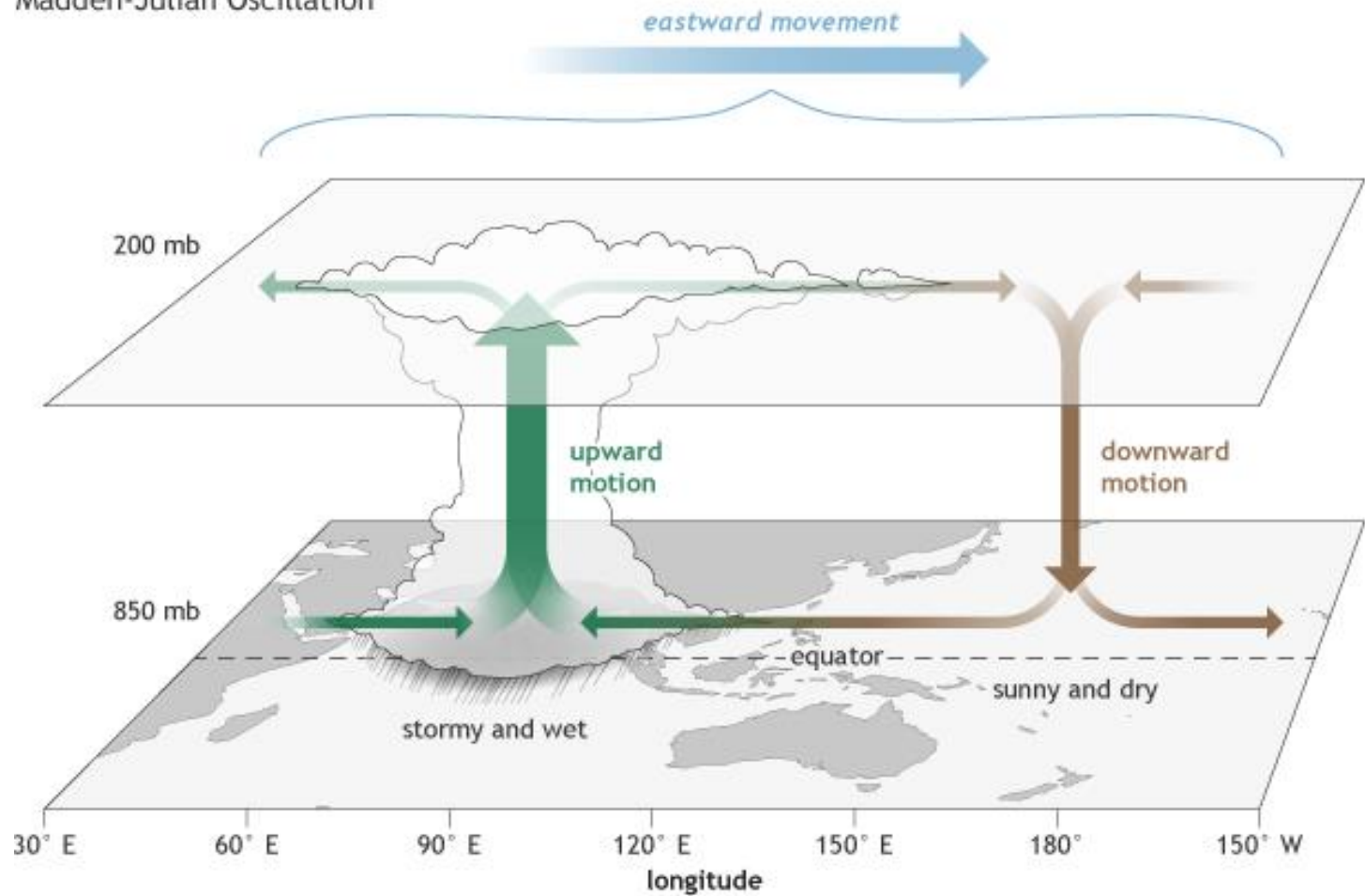
Init: 06z Feb 13 2018 through 00z Feb 16 2018

TROPICALTIDBITS.COM



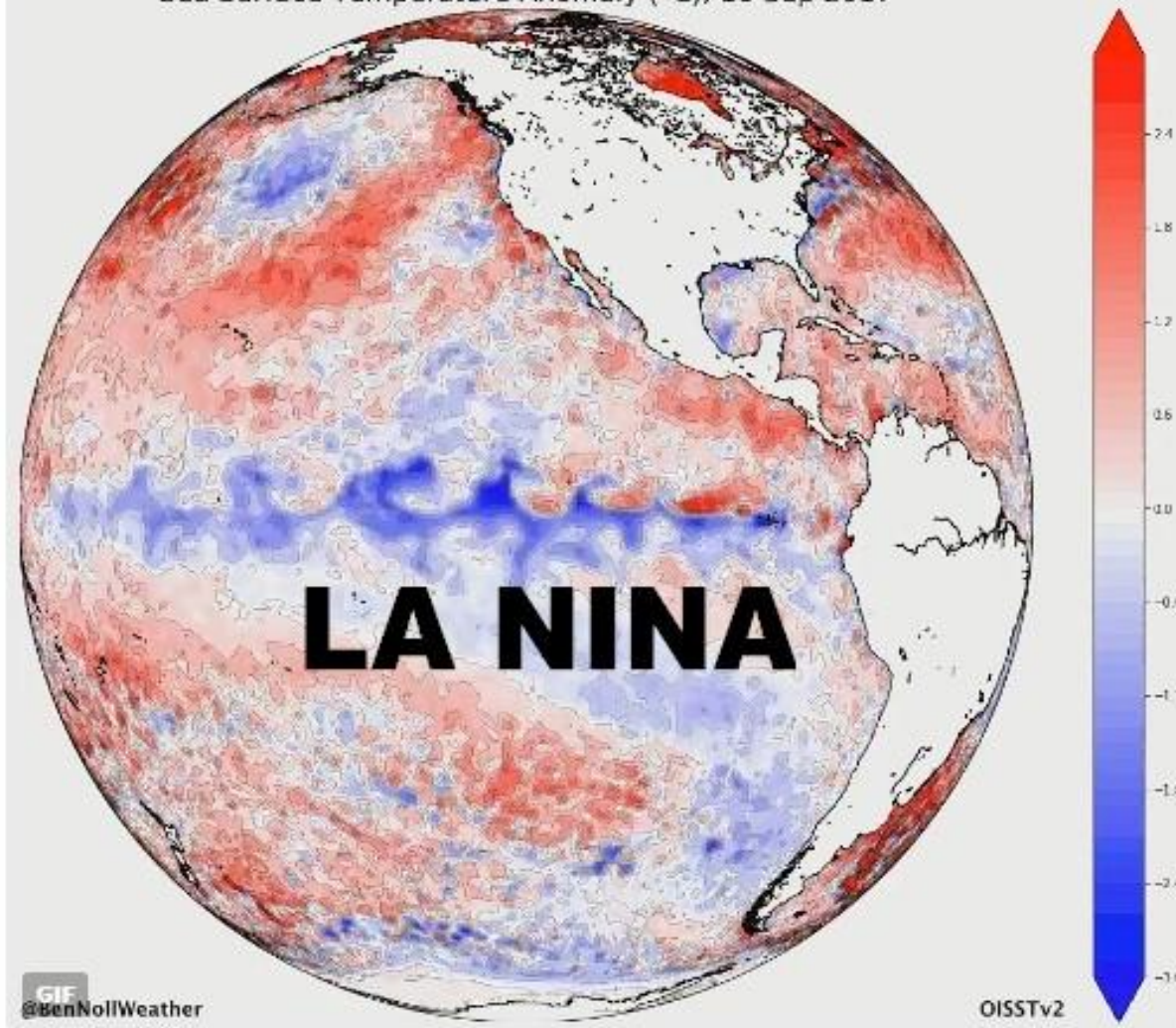
# LETS TALK MJO/ENSO

Madden-Julian Oscillation



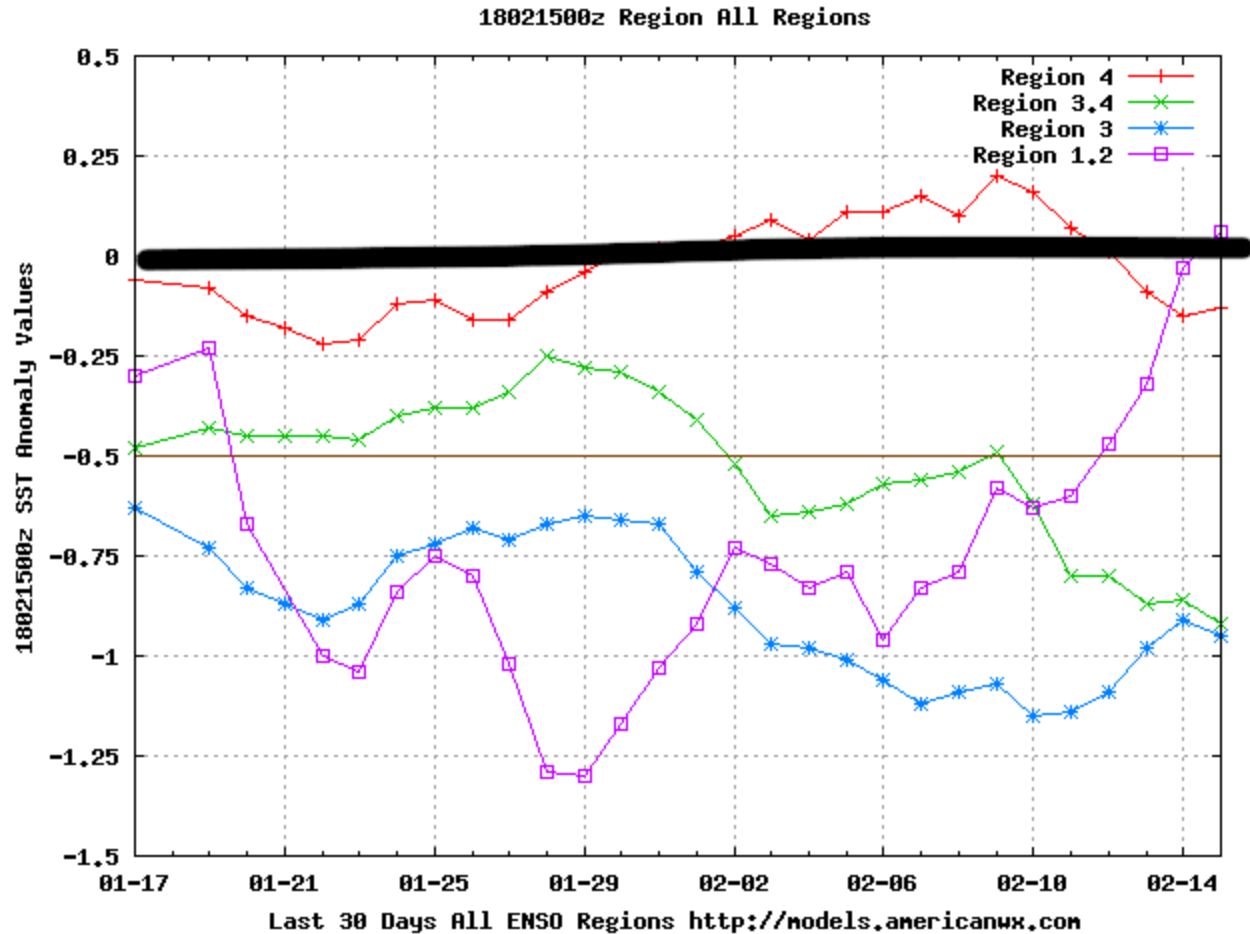


Sea Surface Temperature Anomaly (°C), 10 Sep 2017



6:29 AM - 13 Sep 2017

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



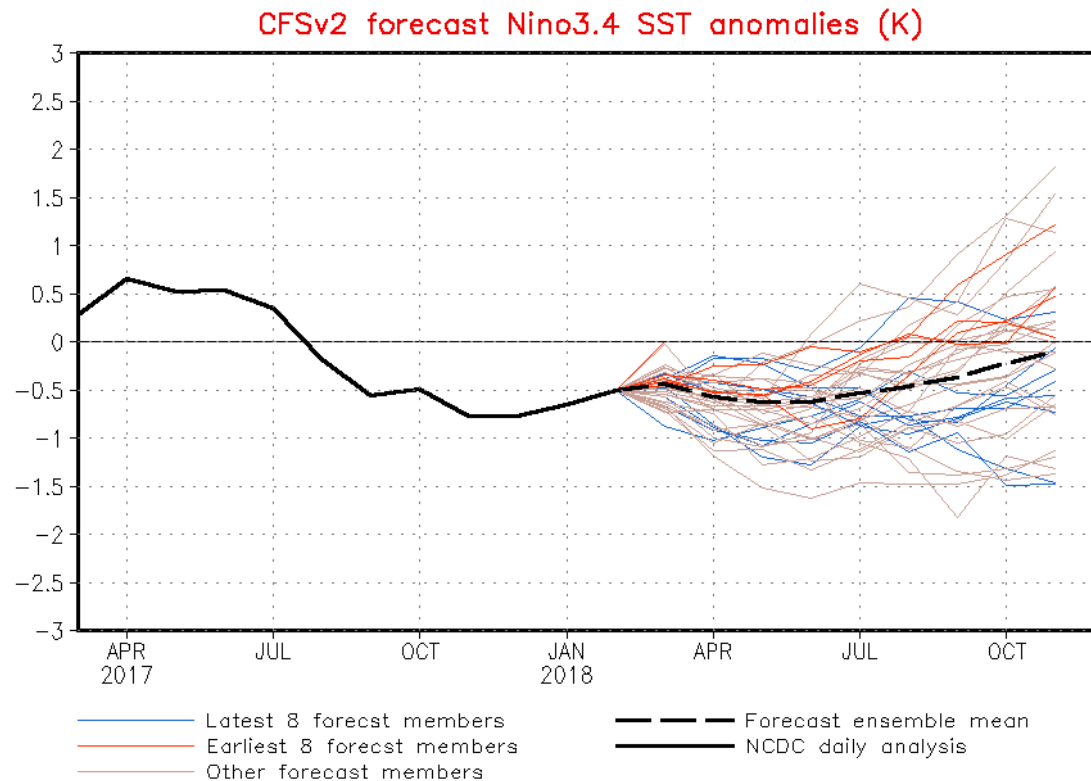


# LATEST CFS MODEL PROJECTION = \*\* La Nina NEVER reaches threshold for MODERATE but stays weak into MAY / JUNE... Prolonging dry pattern into at least part of SPRING 2018



NWS/NCEP/CPC

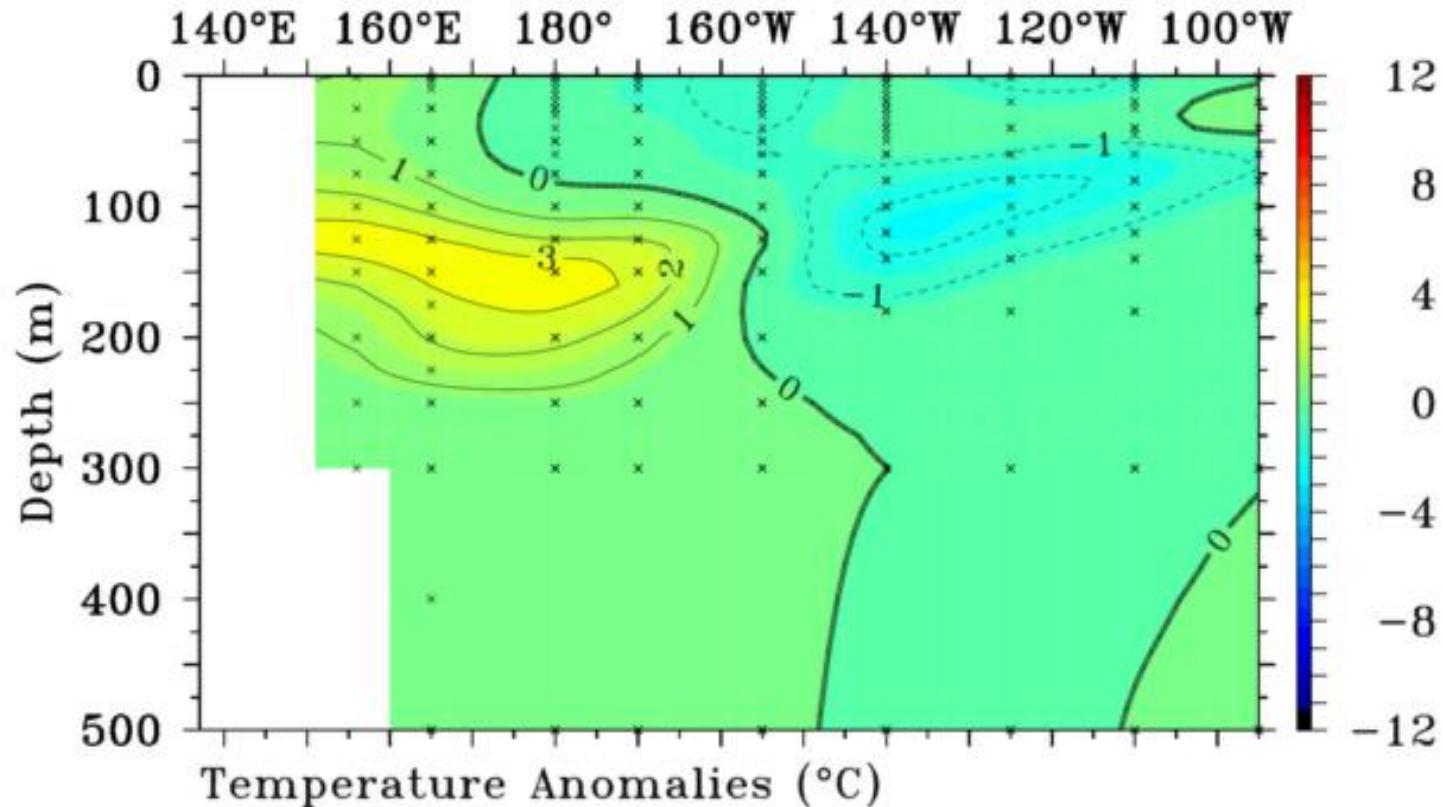
Last update: Thu Feb 15 2018  
Initial conditions: 26Jan2018-4Feb2018



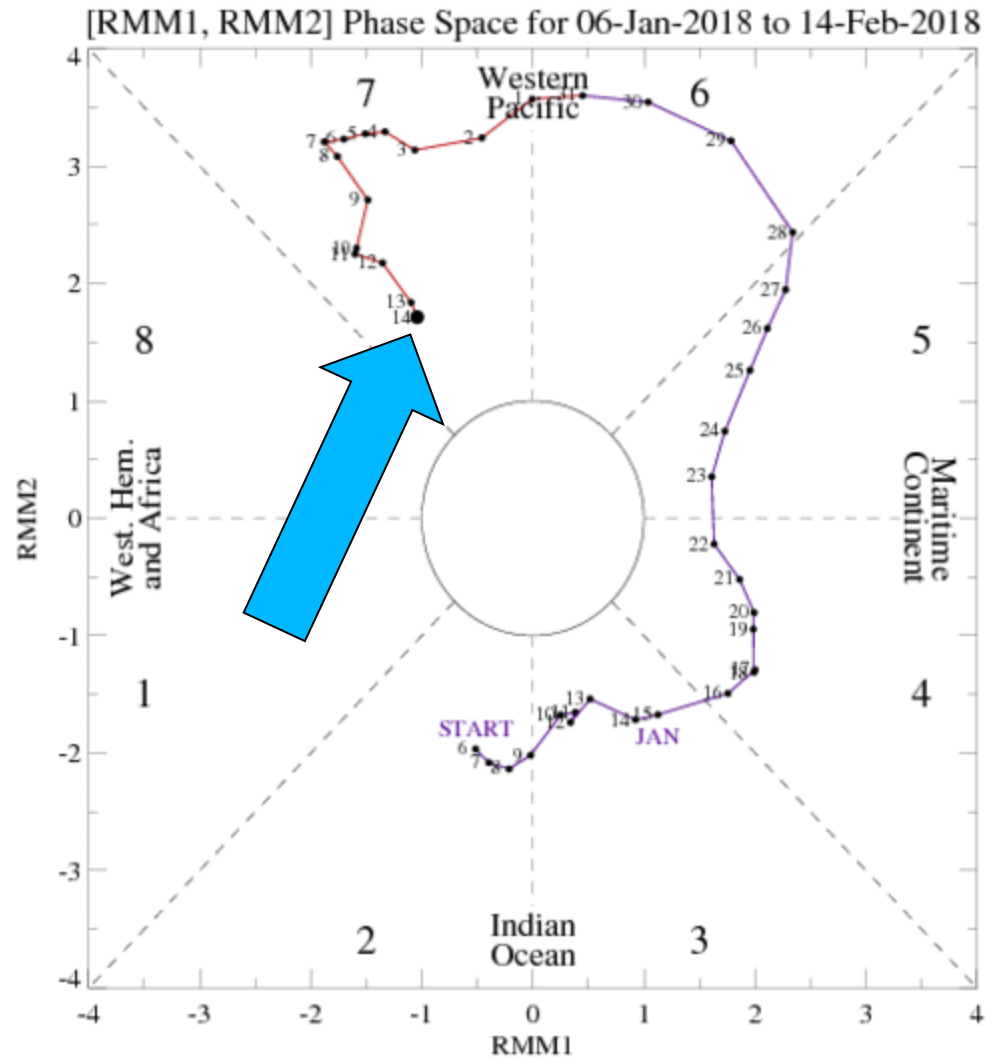
# LOOKING BENEATH THE SURFACE ALONG EQUATORIAL PACIFIC ...WEAK LA NINA HOLDING ON

Five-Day Data

Ending On February 14 2018 2°S to 2°N Average

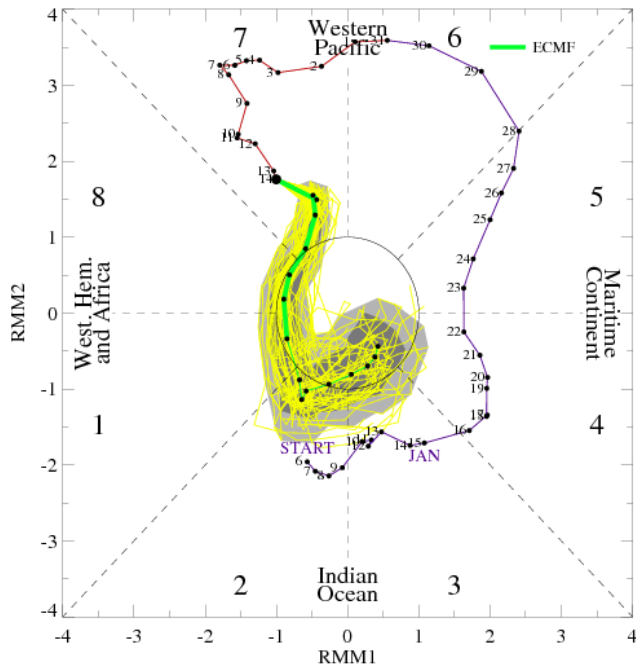


# MJO IS IN PHASE 7



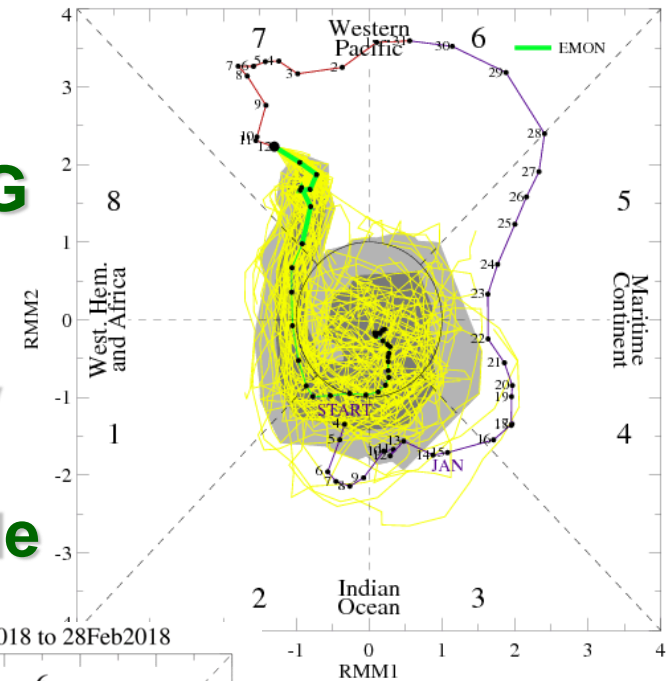


MJO Index Forecast for 15Feb2018-01Mar2018



**ALL MODELS  
now show big  
time WEAKENING  
.. As MJO heads  
to the Neutral  
Circle – or barely  
skims phase 8  
then Neutral circle**

MJO Index Forecast for 13Feb2018-16Mar2018



**FOR US this means  
La Nina pattern takes  
over... DEEP west US  
trough seasonal  
COLD Pacific NW to  
WI some rains for  
Plains better rains for  
Midwest**

MJO Index Forecast for 14Feb2018 to 28Feb2018

